

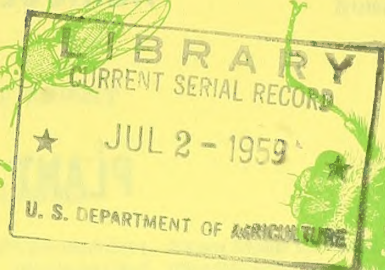
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Cooperative ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearinghouse and does not assume responsibility for accuracy of the material.

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COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

RED-LEGGED GRASSHOPPER hatching in Minnesota and Wisconsin; treatments being advised in central Wisconsin counties. Nymphs of MIGRATORY GRASSHOPPER and other range species heavy in localized areas of the Black Hills in South Dakota. (p. 565). EUROPEAN CORN BORER larvae and egg masses present in many areas. (pp. 566, 589). CORN EARWORM larvae active in corn as far north as Kansas, Missouri, Illinois and New York. Eggs heavy in some instances. (p. 567). BLACK CUTWORM damage to corn severe in areas of Indiana and Illinois, and a CUTWORM has reduced stands of corn 10 to 70 percent in southeastern Nebraska. (p. 568). STINK BUGS damaging corn in Louisiana and in southwestern Alabama. (p. 568). WIREWORMS severely damaging corn in Franklin County, Idaho. (p. 569). CHINCH BUG abundant in wheat and barley in Republic County, Kansas, and damaging corn and sorghum in areas of several states. (p. 569).

GREENBUG populations decreasing generally in North Central States. (p. 569). St. Augustine grass continues to be damaged in Florida, Georgia and Louisiana by CHINCH BUGS. (p. 570).

SPOTTED ALFALFA APHID heavy in Hondo Valley, Lincoln County, New Mexico, and general in Lovelock area of Nevada. (p. 571). ALFALFA WEEVIL very heavy throughout upper Arkansas Valley of Colorado and damage serious in some fields in Carbon and Emery Counties, Utah. (p. 572). THRIPS damaging several crops in a number of states. Controls warranted in Indiana. (p. 573).

Fourth POTATO PSYLLID survey in Wyoming, Colorado and Utah. (p. 576). ONION MAGGOT severely damaged some fields in western Washington. (p. 578).

BOLL WEEVIL controls being applied in North and South Carolina. Punctured squares averaged 14 percent in southern Georgia, 20 percent in southeastern Alabama, 3 percent in delta of Mississippi and 18 percent in Madison Parish, Louisiana. First-generation adults appearing in Louisiana and Texas. (p. 580). BOLLWORMS continue to increase in Alabama and present a potential threat in Mississippi delta. (p. 580). THRIPS damage continues in younger cotton in several states. (pp. 580, 581). TARNISHED PLANT BUG causing heavy blasting of squares in Mississippi delta. (p. 581).

SCREW-WORM infesting livestock, June 17, near Lake Placid, Highlands County, Florida. This is first case reported in southeastern United States eradication area since February 19, 1959. (p. 587).

INSECT DETECTION: Southwestern corn borer found for first time in Richland Parish, Louisiana. (p. 569). Alfalfa weevil reported for first time in Clearfield, Cambria, Indiana and Washington Counties, Pennsylvania, and in Houston County, Alabama. Record in Alabama is first for State. (p. 572).

CORRECTION (p. 589).

ADDITIONAL NOTES (p. 589).

INSECTS not known to occur in the United States. (p. 593).

Reports in this issue are for the week ending June 19, unless otherwise designated.

WEATHER OF THE WEEK ENDING JUNE 22

Temperatures averaged below normal east of the Mississippi River, with average departures of 9° or more in New England, where snow was reported early in the week in the mountains of New Hampshire. Temperatures averaged above to much above normal in the western two-thirds of the Nation, with departures of as much as 9° over parts of the northern Great Plains and Arizona. Low pressure in the New England area produced cloudy and cool weather over the Northeast until Saturday, with minimum temperatures generally in the 40's and 50's. Precipitation was heavy in coastal areas of Maine, New Hampshire and Massachusetts. In the Middle and South Atlantic States and the Mississippi and Ohio Valleys, mild days and cool nights combined to bring temperatures below normal and only light, scattered precipitation. Most states in the area from the Carolinas and Delaware to the Great Lakes report some degree of soil-moisture shortage. Excessive rainfall was recorded over the Florida Peninsula, ranging from 6 inches generally in the southern half up to 15 inches at Ft. Myers, as a low pressure area moved across the State at midweek, resulting in considerable flooding of pastures and farmlands. A destructive tornado was reported at Miami on Wednesday evening, and over 11 inches of rain in 72 hours there raised the total amount this month to almost 20 inches, already a new record for June.

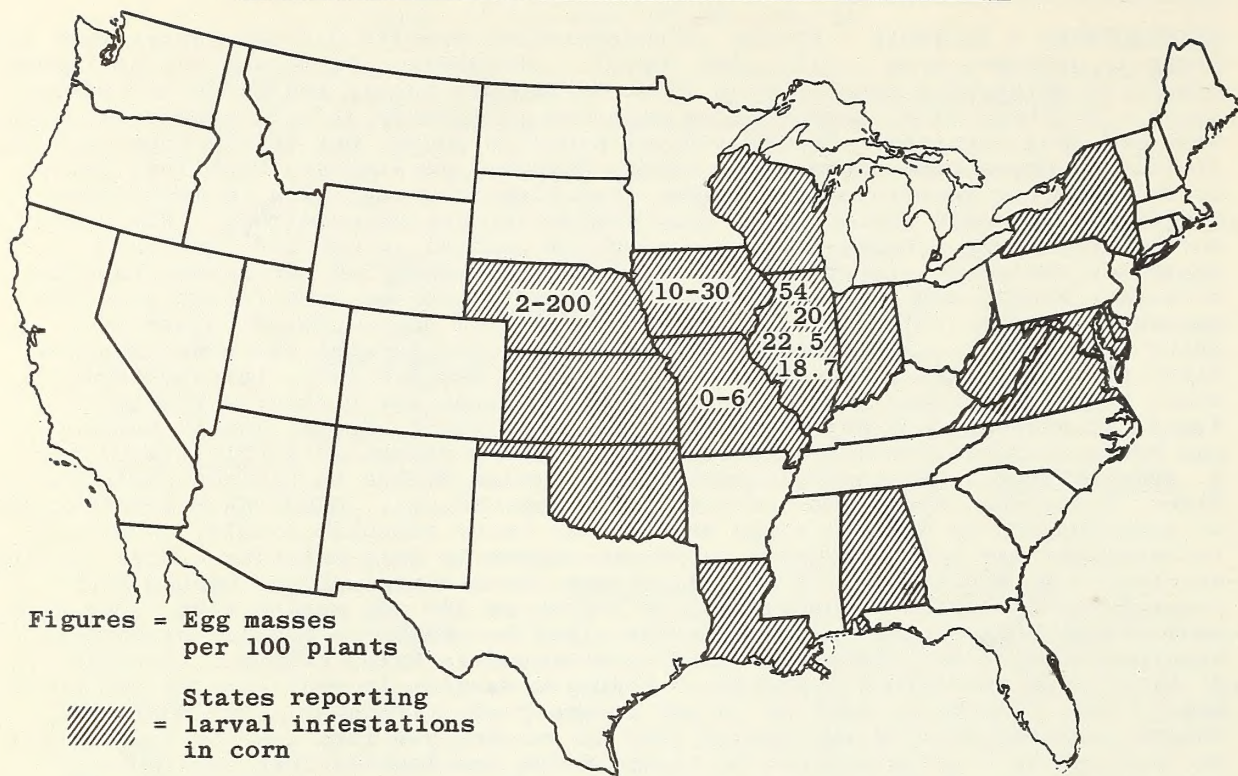
Generally hot and sunny, near normal, conditions prevailed over the southern Great Plains, and extreme heat in the northern Great Plains was replaced by cooler air late in the week. Showers and thunderstorms brought locally moderate to heavy precipitation to scattered areas throughout the region. Reports indicate that topsoil moisture is short in many localities from Kansas northward and the hot, dry weather has resulted in some pasture and crop deterioration. Unseasonably hot weather continued in the Rocky Mountain States and the Far Southwest. Maxima reached into the 90's as far north as eastern Washington and Idaho late in the week, while most stations in Arizona and the interior valleys of California reported temperatures well above 100°. Frequent and general thundershowers over Wyoming and Colorado left generally light rainfall totals and some hail damage, while widely scattered showers produced only light and spotty precipitation in the Far West. Ranges remain dry across the Southwest, while generally abundant moisture and favorable growing weather are reported in the Northwest. (Summary supplied by U. S. Weather Bureau.)

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - ILLINOIS - Nymphs of undetermined species 0-2 per square yard in grass in northern area. (Ill. Ins. Rpt.). WISCONSIN - First and second-instar nymphs of Melanoplus femur-rubrum found in Burnett County roadsides and wastelands. Hatching of M. femur-rubrum occurred in thinner alfalfa stands in Dane, Sauk and Iowa Counties. Counts 1-3 per sweep in young, but thinly vegetated hay fields, in Green Lake, Marquette, Adams, Waupaca and Waushara Counties; but up to about 30 per yard in older fields. Hatching just beginning in more dense fields. Treatments advisable in many fields in central counties. (Wis. Coop. Sur.). MINNESOTA - Hatch of M. femur-rubrum general in south central and southeast districts, first and second instars averaged 3-7 per square yard in alfalfa. Fourth and fifth-instar M. bivittatus observed some fields in south central district. Light hatch reported in central and southwest districts. (Minn. Ins. Rpt.). SOUTH DAKOTA - Nymphs of M. bilituratus and range species, first to fourth instar, found in local areas in Black Hills. Infested areas small but numbers very high. Adults of M. confusus now present. (Burge). Nymphs of grasshoppers not numerous in areas of Clark, Spink, Faulk, Edmunds and Brown Counties checked. (Komanetsky). Young nymphs of M. bivittatus and M. femur-rubrum found in small numbers in alfalfa fields in Davison, Hutchinson, Miner, Minnehaha, Moody and Brookings Counties. (Mast). NEBRASKA - Infestations of grasshoppers in western range area mostly below economic levels. Marginal infestations may cause moderate to severe damage to late-maturing crops. Dominant species, M. bivittatus and M. bilituratus. Some wasteland and second-year sweetclover fields have populations in excess of 100 per square yard. Development ranges from second to fifth instar. (Bell). KANSAS - Complex of several species averages 3-7 per square yard on pastures in Riley County. (Arnett). M. bivittatus predominant species in roadside margins in east central and southeast areas. Counts as high as 15 per square yard. (Peters). OKLAHOMA - Grasshopper counts 1-30 per square yard on margins and from 1-8 per square yard on pastures in 7 areas checked in Caddo, Kiowa and Washita Counties (Hudson); averaged 10 per square yard on rangeland and 20 per square yard on roadsides in area of Ellis County (Owens); light on margins and pastures in 3 areas in Cotton and Stephen Counties (Hatfield); ranged 1-10 per square yard along roadsides and field margins in Carter, Stephens, Garvin and McClain Counties, with the dominant species being Mermiria spp. and Melanoplus spp. (Pela); and averaged 3 per sweep in alfalfa field in Choctaw County (Goins).

TEXAS - Heavy infestations of undetermined species in Bosque County, apparently increasing in corn. Infestations light to medium in scattered areas of county, still in fence rows and pastures. (Tex. Coop. Rpt.) LOUISIANA - M. differentialis nymphs averaged 220 per 100 sweeps in grass along roadsides at Newelton. Several species averaged 168 per 100 sweeps on alfalfa in Tensas Parish. (Spink). COLORADO - Situation very spotty, growers and county agents aware of problem spots. Control operations well in hand. (Col. Ins. Sur.). UTAH - Grasshopper hatch generally well progressed in Weber, Salt Lake, Emery, Carbon and Sanpete Counties. Low, but local areas have threatening populations. (Knowlton). IDAHO - Hatching in Dietrich Butte area. Few M. bilituratus nymphs in fourth instar. (Smith, Bishop). ALABAMA - Conocephalus fasciatus caused severe defoliation of alfalfa in Lee County. (Hays). DELAWARE - Nymphs feeding lightly on corn in Sussex County and becoming more common most alfalfa fields. (Burbutis). MARYLAND - Small nymphs, principally M. femur-rubrum, becoming abundant in red clover in different sections of State. Counts averaged 7 per sweep on red clover at Bushwood, St. Marys County. (U. Md., Ent. Dept.).

SOUTHERN CORNSTALK BORER (Diatraea crambidoides) - NORTH CAROLINA - Injuring stalks and roots of corn in Duplin County and caused complete loss of 2-acre corn field in Robeson County. (Reynolds, Owens, Farrier).

European Corn Borer Situation, Week Ending June 19

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - **NEW JERSEY** - Flights dropped off considerably. Egg masses difficult to find on sweet corn in Cumberland County, June 15. Few egg masses found in central area. (Ins. Dis. Newsl.). **DELAWARE** - Heavy in wheat at Greenwood, high percent of stalks broken and many heads incompletely formed. Borers in wheat well advanced, mostly fifth instar, with few pupae present. Populations in early field corn and sweet corn very high. Larvae in corn range from first to fifth instar, third and fourth instars most common. (Burbutis). **MARYLAND** - Larvae moderate to heavy in whorls of early corn in Kent County. Whorl infestations in early corn in Talbot and Worcester Counties range from 10-50 percent. (U. Md., Ent. Dept.). **VIRGINIA** - Damaged wheat in practically all fields in Lancaster County and 10 percent damage one field (Rowell, McSwain); caused considerable damage to wheat in King George County (Rowell, Hall); damaged some wheat in Henrico County (Rowell, Davis); common in wheat in Prince Edward County (Peery); and damaged corn in Albemarle County (Amos, Smith). **OHIO** - Adult emergence and oviposition greatly delayed at Wooster by cool nights. In southern area, oviposition practically complete and in northern area about 50 percent complete. (Triplehorn). **INDIANA** - Hatching as far north as Warsaw. Whorl feeding up to 32 percent in infestations. (Matthew). **ILLINOIS** - Average number of egg masses per 100 plants was 54 in northwest, 20 in northeast, 22.5 in west and 18.7 in central area. Percent hatch was about 50 in northwest, 50-60 in northeast, 60-75 in west and 60-80 in central area. Percent of infested plants averaged 17.5 in northwest, 7.1 in northeast, 27.5 in west and 14.2 in central area. Larvae per infested plant averaged 4 in northwest, 1 in northeast, 5 in west and 3.3 in central. Moth emergence about complete except in northern area. An occasional field in central area may warrant treatment. (Ill. Ins. Rpt.). **WISCONSIN** - Eggs probably hatching most northwest, northeast and north central areas. Moth flights light and eggs scarce. Newly hatched larvae found in Dane and Grant Counties. Number of sweet corn ears infested with first-brood larvae expected to be less than 2 percent in corn planted before third week in May. (Wis. Coop. Sur.).

MINNESOTA - Emergence well underway in southern two-thirds of State, about 50 percent of pupae emerged. Emergence will be completed rapidly during warm weather and eggs should be appearing. (Minn. Ins. Rpt.). SOUTH DAKOTA - Pupation complete in southeast and nearly complete in east central area. Very small percent of emergence has taken place in southeastern area. (Mast). NEBRASKA - Adult flight in Lincoln County much lighter than in 1958. Emergence 100 percent in eastern area. Egg mass counts range from 2 to over 200 per 100 plants in ear corn; feeding signs, 0-57 percent. (Pruess, Roselle). MISSOURI - Egg laying complete in central and west central areas. Egg masses in northwest range 0-6 per 100 plants. In central and west central areas, percent of plants showing feeding damage ranged 0-65 percent. Larvae mostly fourth and fifth instar in southeast area. (Kyd, Thomas, Munson). KANSAS - All fields of corn 30 inches or more, in Republic County, infested. Some moths still laying eggs, but oviposition nearing completion and egg masses smaller than normal. Most larvae in early instars, feeding in whorls at present. Infestation ranged 5-90 percent, most fields averaged 20-61 percent infested plants. (Burkhardt). An average of 30 percent of corn plants in Johnson, Douglas and Jefferson Counties show evidence of leaf feeding. Oviposition virtually complete. (Burkhardt, Peters). OKLAHOMA - Extremely light in corn fields in Payne County. Larvae in third to fifth instar. (Arbuthnot). LOUISIANA - Infestations averaged less than 2 percent in corn fields examined in northeast area. Small larvae of second generation present. Most infestations were of first generation and confined to older corn. ALABAMA - Larval development reached third instar in Tennessee Valley area and is approximately 10 days behind in Sand Mountain area. (Eden, June 15).

STALK BORER (*Papaipema nebris*) - MISSOURI - Populations heavy in field margins, with damage to marginal rows of corn in southwest and west central areas. (Kyd, Thomas, Munson). KANSAS - Abundant on numerous crops in Brown County, entire small fields of corn and margins of other corn fields heavily infested. (Burkhardt). Found in corn plants in Chase, Jefferson and Douglas Counties along margins of fields. First 2 or 3 rows in several fields severely damaged. (Peters).

SUGARCANE BORER (*Diatraea saccharalis*) - LOUISIANA - Larvae of second generation observed on corn stalks in southern area. Second generation feeding signs observed in 34 percent of all sugarcane fields, an average of 2.6 percent of plants infested with young second-generation larvae in fields where recent feeding observed. (Spink).

CORN EARWORM (*Heliothis zea*) - DELAWARE - Light in field corn in Sussex County. (Burbutis). VIRGINIA - Severe in corn in southern Cumberland County. (Morris, Seay). ALABAMA - Activity increasing in field corn in central and southern areas, both eggs and young larvae plentiful on developing ears. Larval infestation averaged 20 percent in southeastern counties checked. (Grimes). ILLINOIS - Eggs, 3-4 per silk, in early sweet corn field in southern area. Larvae also found in tassels. (Ill. Ins. Rpt.). MISSOURI - Budworm damage continuing in southwest area. Eggs being deposited in heavy numbers on silks of sweet corn in southwest. Between broods in southeast; eggs average 0.2 per silk. (Kyd, Thomas, Munson). KANSAS - Moths and eggs found most corn fields in Republic County; generally less than 5 percent larval damage. (Burkhardt). Damage observed in several corn fields in east central and southeastern areas. Damage less than 10 percent. (Peters). OKLAHOMA - Eggs heavy on corn silks in south central area, counts 1-25 per ear with over 90 percent of ears infested. Larvae light to medium in fields. Moths numerous and active on corn and alfalfa. (VanCleave). Approximately 60 percent of tassels infested in corn field in Garvin County (Pela), light to heavy egg counts in corn fields in Choctaw and Pushmataha Counties (Goin) and heavy on sweet corn in Warner area, with approximately 75 percent of stalks infested (Washum, Robinson). NEW MEXICO - Light to moderate in whorls of field corn in Dona Ana, Luna, Hidalgo, Eddy, Chaves, Lea, Roosevelt and Curry Counties. (N. M. Coop. Rpt.).

CUTWORMS - INDIANA - Severe in corn in northwest area, counts up to 3 per hill. Predominant species, Agrotis ypsilon. (Gould, Osmun). ILLINOIS - A. ypsilon seriously damaging corn fields from Ridgeway to Kankakee on east and from Chester to Morrison on west. Late-planted fields being ruined. In practically all cases where damage occurred, soil treatments not used. (Ill. Ins. Rpt.). NEBRASKA - A corn cutworm is present in moderate to severe numbers in corn in localized areas of most southeastern counties. Damage ranges 10-70 percent reduction of stands. Chorizagrotis auxiliaris emergence in western area passed 50 percent; moth flights reported in many western cities. Peridroma margaritosa infestations light in surveyed area. (Roselle, Pruess). MISSOURI - Damage continues to appear in areas throughout State in late-planted corn. Several species, including A. ypsilon, present. (Kyd, Thomas, Munson). KANSAS - Some corn will require replanting in Shawnee County. In Republic County, less than 5 percent of corn attacked by cutworms in few isolated fields. (Burkhardt). IDAHO - C. auxiliaris causing severe damage on approximately 200 acres of dry-land spring barley near Iona, Bonneville County. (Moss). Adults general and abundant in southwestern and northern areas and annoying around homes. Heaviest flights of adults seen in recent years. (Scott, Manis).

CORN ROOT WEBWORM (Crambus caliginosellus) - DELAWARE - Rather severe infestation found in New Castle County. Young plants greatly deformed, some plants completely destroyed. (Burbutis).

CORN LEAF APHID (Rhopalosiphum maidis) - NORTH DAKOTA - First specimen of season collected on barley in Traill County. (N. D. Ins. Rpt.). KANSAS - Sorghum plants in few fields in Johnson County had purple leaves caused by earlier infestation. Population now declining, with some plants having as many as 100 aphids; however, most had less than 5. (Peters). OKLAHOMA - Light to medium in sorghum and corn fields in south central area. Heaviest populations, 100 per plant, found on small sorghum plants in Murray County. (VanCleave, Meharg). Counts averaged 50 per stalk in corn field in Choctaw County (Goin) and 75 per tassel in corn field in Garvin County (Pela). NEVADA - Heavy in barley in Lovelock, Pershing County. Treatments being applied. (Snyder). General infestation varying from light to heavy in barley in Lyon County. (Batchelder). UTAH - Of concern on barley at Paradise. (Dorst, Davis).

STINK BUGS - LOUISIANA - Several species, including Euschistus servus, E. ictericus and Nezara viridula, damaging corn in early silking stage. In southern area, several species found feeding on corn interplanted with soybeans; counts 0-46 per 100 plants. Considerable damage observed in 2 fields. (Spink). ALABAMA - N. viridula continues to damage corn in southwestern area. (Eden). Very little activity in southeastern area. (Grimes). TEXAS - Medium infestation of undetermined species, averaging 2 per sweep, in Waller County and medium on rice in Colorado County. (McClung).

CORN FLEA BEETLE (Chaetocnema pulicaria) - OKLAHOMA - Counts 1-4 per stalk in corn and sorghum in Pushmataha and Choctaw Counties (Goin) and averaged 0.16 per stalk in sorghum field in Grady County (Pela). INDIANA - Very abundant in scattered areas of State on corn, necessitating some treatment. (Matthew). MARYLAND - Light to moderate on field and sweet corn most sections. (U. Md., Ent. Dept.).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - ILLINOIS - Adults averaged 5 per corn plant in northwestern area, 22.5 percent of plants infested. In northeast and central sections, corresponding figures were 4 adults per plant and 10 percent of plants infested. (Ill. Ins. Rpt.). DELAWARE - Present on alfalfa throughout State. (Burbutis).

DUSKY SAP BEETLE (Carpophilus lugubris) - DELAWARE - First adults of season present in several areas, especially in corn infested by European corn borer. (Burbutis).

BILLBUGS - ILLINOIS - Damaging 0-60 percent of corn in some southwestern fields. (Ill. Ins. Rpt.).

WIREWORMS - IDAHO - Severely damaging corn throughout Franklin County. Wireworms more general and severe than in any previous year. (Roberts). MISSOURI - Damage by Horistonotus uhlerii appearing in corn in sandy areas in southeast. Small spots in fields killed. (Kyd, Thomas, Munson).

THIEF ANT (Solenopsis molesta) - KANSAS - Damaging sorghums where seed not treated in Riley and Pottawatomie Counties. Few fields being replanted. (Burkhardt).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - LOUISIANA - Infestations in corn in northeast practically nonexistent; however, one larva found in northern Richland Parish which is a new Parish record. Infestations 0-4 percent in 7 fields in northwest area. Second-generation larvae observed on young corn. (Spink). OKLAHOMA - Infestations very light in corn field in Payne County. Larvae in third and sixth instars. (Arbuthnot).

A SPIDER MITE (Oligonychus stickneyi) - NEW MEXICO - Light infestations on field corn in Dona Ana County. (N. M. Coop. Rpt.).

SORGHUM MIDGE (Contarinia sorghicola) - LOUISIANA - Heavy infestations on sorghum in Caddo Parish. (Spink).

SIX-SPOTTED LEAFHOPPER (Macrostes fascifrons) - MINNESOTA - Counts 12-35 per 10 sweeps on 2-3 inch flax in northwest district, 2-10 per 10 sweeps on alfalfa in west central district. (Minn. Ins. Rpt.).

CHINCH BUG (Blissus leucopterus) - MISSOURI - Migrations from small grain to corn and grain sorghum started in southwest. Some fields of small grain sorghum being taken out. (Kyd, Thomas, Munson). KANSAS - Abundant in wheat and barley in Republic County, counts as high as 300 per linear foot of row. Found in virtually all fields and now migrating to corn and sorghum. Damaging corn and sorghum where they border small grains. (Burkhardt). Found most corn and sorghum fields in east central and southeastern areas of State. (Peters). OKLAHOMA - Killing sorghum near Grove, Delaware County (Howell); ranged 0.1-10 per stalk in sorghum and corn fields in Choctaw and Pushmataha Counties (Goin); light in corn field in Garvin County and sorghum field in Grady County (Pela); and ranged 0-2 per stalk in corn field in Bryan County (Vinson). TEXAS - Heavy in Moore County, causing roasting ear corn to "fire" 2 feet above ground. Two fields treated. Also reported in sorghum in Moore County. (Tex. Coop. Rpt.).

GREENBUG (Toxoptera graminum) - WISCONSIN - Found as far north as Ashland County. Counts per sweep in oat fields in eastern counties that were noticeably affected were 45 in Ozaukee, 50 in Sheboygan, 36 in Manitowoc and 60 in Kewaunee. Problem is generally localized. (Wis. Coop. Sur.). MINNESOTA - Populations apparently declined nearly all areas of State. Many oat fields not recovering from previous feeding; red leaf disease may be responsible. (Minn. Ins. Rpt.). NORTH DAKOTA - Counts continue low in eastern area small grain fields. Predators continue to increase. (N. D. Ins. Rpt.). ILLINOIS - Only few left in northern area oat fields; 0-70 per 100 sweeps found. (Ill. Ins. Rpt.).

ENGLISH GRAIN APHID (Macrosiphum granarium) - MAINE - First spring migrant caught in wind vane traps at Presque Isle on June 6. (Simpson). ILLINOIS - Populations 0-200 per 100 sweeps in oats in northern area. (Ill. Ins. Rpt.).

HESSIAN FLY (Phytophaga destructor) - NEBRASKA - Heavy infestations of flax-seed stage present in many fields of south central and southeastern areas. Wheat 20-30 percent lodged in many fields. (Hill, Roselle). KANSAS - Light to heavy in Dickinson and Marion Counties (Painter, Maxwell, Posado, Peters) and present on some early wheat in Brown County (Burkhardt).

WHEAT JOINTWORM (Harmolita tritici) - VIRGINIA - Light to heavy damage to wheat in spotted areas of King and Queen County. (Sedivy).

RICE WATER WEEVIL (Lissorhoptrus oryzophilus) - TEXAS - Larvae ranged 40-99 per foot of row in test rice plots and 30-40 in large rice fields in Jefferson County. (Tex. Coop. Rpt.).

A RICE DELPHACID (Sogata orizicola) - LOUISIANA - Forty rice fields in St. Landry, Evangeline, Vermilion and Acadia Parishes were checked for presence of this vector of hoja blanca disease. One hundred sweeps made in each field with negative results. (Spink).

ARMYWORM (Pseudaletia unipuncta) - WISCONSIN - Few small larvae found in oats and alfalfa and one nearly mature larva found feeding on corn. (Wis. Coop. Sur.). NEW JERSEY - One moderate and several light infestations observed in Mercer County on June 12. (Ins. Dis. Newsl.). NORTH DAKOTA - Moderate to heavy moth flight occurred in eastern area. (N. D. Ins. Rpt.).

FALL ARMYWORM (Laphygma frugiperda) - LOUISIANA - Larval counts 146 per 100 sweeps in young rice in Vermilion Parish. One corn field lightly infested at Houma. (Spink).

ARMYWORMS - FLORIDA - Building up on Johnson grass in east Pasco County. Damage severe on several lawns at Patrick Air Base at Cocoa. (Fla. St. Plt. Bd., May Rpt.).

EUROPEAN CHAFER (Amphimallon majalis) - NEW YORK - Few adults, believed to be this species, observed flying in Brooklyn on May 28. On June 1, specimens were obtained for confirmation. A moderately heavy flight observed on night of June 3. Delimiting survey was discontinued after repeated negative soil sampling during May in territory surrounding infested area. Infestation known to cover 14 square miles, encompassing south Brooklyn, Prospect Park, Bay Ridge, Fort Hamilton and Bensonhurst sections of Brooklyn. Negative surveys were made in Queens, Bronx, Manhattan and Staten Island during May. (PPC, East. Reg.).

CHINCH BUGS (Blissus spp.) - NEW JERSEY - B. leucopterus hirtus appearing in lawns containing bentgrass. (Ins. Dis. Newsl.). FLORIDA - B. leucopterus insularis still heavy in St. Augustine grass throughout north central Dade County, especially in Miami Beach, where increase is noted. Activity apparently less since heavy rains in north Dade County and in Palm Beach County. (Fla. St. Plt. Bd., May Rpt.). GEORGIA - Heavy infestations on millet in Walton County. (Shores). Heavy infestations on St. Augustine grass in several southern counties. (Johnson). LOUISIANA - B. leucopterus insularis still severe on St. Augustine grass lawns in southern area. (Spink).

GROUND PEARLS - SOUTH CAROLINA - Many lawns being seriously damaged in Charleston and are plentiful in centipede lawns in areas of Hampton County. (Nettles et al.).

A SCALE (Odonaspis ruthae) - CALIFORNIA - Medium infestations of Bermuda grass roots in Santa Paula, Ventura County. (Cal. Coop. Rpt.).

A STRIPED BLISTER BEETLE (Epicauta sp.) - LOUISIANA - Fairly heavy, but localized, infestations observed on weeds in corn fields in Tensas Parish and on alfalfa in Caddo Parish. (Spink). MISSOURI - Spots within widely scattered fields in extreme southeast being defoliated. (Kyd, Thomas, Munson).

WHITE-FRINGED BEETLES (Graphognathus spp.) - ALABAMA - First adults of season reported in Florala area on May 20. SOUTH CAROLINA - Treatments on all known infestations in State were completed during May. GEORGIA - Adults recovered in Coffee County on May 15; however, emergence very light throughout State. (PPC, So. Reg.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - KANSAS - Found in few alfalfa fields in Butler, Cowler, Elk and Greenwood Counties. Counts ranged from less than 1 to less than 10 per sweep. (Peters). OKLAHOMA - Extremely light most alfalfa fields in south central area. Heaviest counts in Murray County field which averaged 50 per sweep. (VanCleave, Meharg). Counts 2-24 per sweep in alfalfa fields in Johnston and Bryan Counties (Vinson), 0-2 per sweep in alfalfa in Choctaw County (Goin) and 10-100 per square foot in field in Payne County. (Stiles). COLORADO - Low in Arkansas Valley. None found in northeastern or western areas this year. (Colo. Ins. Sur.). NEW MEXICO - Heavy infestation in Hondo Valley of Lincoln County and Dexter-Hagerman area of Chaves County. (N. M. Coop. Rpt.). NEVADA - General infestation in Lovelock area, Pershing County. Counts varied from 5 per sweep to 75 or more per stem in heavily infested fields. Various predators present but not numerous enough to contain or reduce populations in many fields. (Bechtel, Snyder). Averaged 1 per sweep, mostly winged, in Smith and Mason Valleys, Lyon County. (Batchelder).

PEA APHID (Macrosiphum pisi) - NEVADA - Generally high in Lovelock area of Pershing County; averaged 50-100 per sweep in lightly infested fields to 400-500 per sweep in heavily infested fields. In majority of fields, both pea aphid and spotted alfalfa aphid present with former species predominating. (Bechtel, Snyder). WYOMING - Counts per 100 sweeps were 10 in Saratoga area, 60 in Burntfork area and 90 in Evanston area. (Davison). IDAHO - Infestations in alfalfa fields in Nez Perce, Latah, Lewis and Clearwater Counties remain low. (Manis). OKLAHOMA - Light most alfalfa fields in south central area. (VanCleave, Meharg). Light in alfalfa checked in Bryan, Johnston, Carter, Choctaw and Kiowa Counties. (Vinson, Pela, Goin, Hudson). KANSAS - Found all alfalfa fields in east central and southeastern areas. Counts ranged from less than 5 to 25 per sweep. (Peters). NEBRASKA - Averaged 9-20 per 20 sweeps in eastern area; decrease from previous week. (Roselle). SOUTH DAKOTA - Relatively low in east central area, counts up to 9 per 10 sweeps. (Mast). MINNESOTA - Generally light most areas. (Minn. Ins. Rpt.). WISCONSIN - Counts on alfalfa in Brown, Door and Kewaunee Counties decreasing. (Wis. Coop. Sur.). DELAWARE - Common to abundant in alfalfa most areas. (Burbutis).

CLOVER APHID (Aphis bakeri) - WASHINGTON - Light infestation in red clover seed fields near Quincy, Grant County. (Johansen). IDAHO - Infestation very widespread in southwestern area. Controls indicated most fields next few weeks. (Waters).

AN APHID (Myzus sp., prob. solani) - CALIFORNIA - Heavy infestations on Ladino clover in Red Bluff area, Tehama County. (Cal. Coop. Rpt.).

MEADOW SPITTLEBUG (Philaneus leucophthalmus) - WISCONSIN - Nymphs generally present in alfalfa in eastern and southern sections; adults noted some areas. There appears to be a greater than normal gap between first and last hatching. (Wis. Coop. Sur.). DELAWARE - Abundant in alfalfa in New Castle County and present in Kent and Sussex Counties. (Burbutis). ILLINOIS - Adults exceptionally abundant in old clover and alfalfa fields in northern area. Hay harvest now causing migrations to other plants; few nymphs still observed. (Ill. Ins. Rpt.).

POTATO LEAFHOPPER (Empoasca fabae) - WISCONSIN - Nymphs and adults generally present in alfalfa; 12 per 25 sweeps found in alfalfa regrowth. Fields of untreated regrowth expected to show "yellowing" and decreased yields in many areas. (Wis. Coop. Sur.). NORTH DAKOTA - Counts in cereals and legumes range from 0-10 per 100 sweeps. (N. D. Ins. Rpt.). NEBRASKA - Counts 5-10 per 100 sweeps in western area and 5-20 per 25 sweeps in eastern area. (Pruess, Roselle). ILLINOIS - Adults 40-160 per 100 sweeps in northwestern area, 740 in one field in central area. Nymphs 0-100 per 100 sweeps in northwestern area, 860 in one field in central area. (Ill. Ins. Rpt.). MARYLAND - Averaged one per sweep on alfalfa in Howard County. Considerably less than one per sweep on alfalfa in Calvert County. (U. Md., Ent. Dept.).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - LOUISIANA - Averaged 148 per 100 sweeps on alfalfa in Tensas Parish and ranged 30-132 per 100 sweeps in Caddo Parish. (Spink). OKLAHOMA - Light, becoming more common in alfalfa in south central area. Counts 0-0.3 per sweep. (VanCleave, Meharg). NEW MEXICO - Average 2 per sweep in alfalfa in Chavez County. (N. M. Coop. Rpt.).

LYGUS BUGS (Lygus spp.) - OKLAHOMA - Counts 1-2.5 per sweep in alfalfa fields in south central area (VanCleave, Meharg), 0-6 per sweep in Bryan County (Vinson) and 2-6 per sweep in Choctaw County (Goin). WYOMING - Counts per 100 sweeps were 6 in Saratoga area, 20 in Burntfork area and 3-4 in Evanston area. (Davison). UTAH - All stages moderate to numerous in alfalfa in Carbon, Emery, Sanpete and Utah Counties. (Knowlton). ARIZONA - Continued to increase in alfalfa statewide; counts 200 per 100 sweeps. (Ariz. Coop. Sur.).

TARNISHED PLANT BUG (Lygus lineolaris) - NEBRASKA - Averaged 10 per 10 sweeps in alfalfa in eastern area. (Roselle). MINNESOTA - Counts per 10 sweeps were 3-10 in alfalfa in southeast and south central, 10-35 in west central, 5-10 in central and 10-50 in northwest. (Minn. Ins. Rpt.). ILLINOIS - Adults ranged 10-140 per 100 sweeps in clover and alfalfa in northern area, nymphs 0-100 per 100 sweeps. (Ill. Ins. Rpt.). LOUISIANA - Ranged 200-300 per 100 sweeps on alfalfa in Caddo Parish. (Spink). DELAWARE - Adults abundant on alfalfa throughout State and nymphs becoming more common in Kent and New Castle Counties. (Burbutis).

PLANT BUGS (Adelphocoris spp.) - MINNESOTA - Counts per 10 sweeps were 5-20 in southeast and south central areas, 5-30 in west central and 80-100 in central area. (Minn. Ins. Rpt.). SOUTH DAKOTA - A. lineolatus averaged 8 per 10 sweeps on alfalfa in east central area. Highest count per field was 20 per 10 sweeps. (Mast). NEBRASKA - A. lineolatus populations light, 1 per 10 sweeps, in eastern area. (Roselle).

ALFALFA WEEVIL (Hypera postica) - PENNSYLVANIA - Found for first time in Clearfield, Cambria, Indiana and Washington Counties. (Newton). ALABAMA - Larvae collected from alfalfa in Houston County on April 9. Extensive damage occurred. This is the first collection in the State. (Grimes). WYOMING - In 100-acre field south of Evanston, adults averaged 75 and larvae 100 per 100 sweeps; damage was 30-35 percent. (Davison). COLORADO - Very heavy throughout upper Arkansas Valley. Of concern since growers failed to realize seriousness of problem. Serious in Pueblo County. Spread during the past 3 years has been spectacular. Began in field near Rocky Ford, Otero County, and now well distributed. (Colo. Ins. Sur.). IDAHO - Larvae about half-grown in Parma area. Populations very light this year in southwestern area. (Waters). UTAH - Damage serious in numerous fields in Carbon County and some Emery County fields. Damage moderate generally in Sanpete and Salt Lake Counties where controls were neglected. (Knowlton).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - WASHINGTON - Larvae feeding on red clover buds near Quincy, Grant County. Infestation estimated at 10 percent in borders of fields. (Johansen). ILLINOIS - Counts 0-100 per 100 sweeps in northern half of State. (Ill. Ins. Rpt.).

CLOVER SEED CHALCID (Bruchus pisorum) - WASHINGTON - Building up in red clover seed fields in Grant County; 10-15 adults per 25 sweeps. (Johansen).

ASH-GRAY BLISTER BEETLE (Epicauta fabricii) - SOUTH DAKOTA - Averaged 4 per sweep in alfalfa in Davison County. (Mast).

A WEEVIL (Sitona flavescens) - CALIFORNIA - Medium infestation of Ladino clover in Galt area, Sacramento County. (Cal. Coop. Rpt.).

CLOVER ROOT CURCULIO (Sitona hispidula) - CALIFORNIA - Adults prevalent on alfalfa in Rio Vista area, Solano County. (Cal. Coop. Rpt.).

PALE-STRIPED FLEA BEETLE (Systema blanda) - MARYLAND - Adults averaged 5 per sweep on red clover at Bushwood, St. Marys County. (U. Md., Ent. Dept.).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - DELAWARE - Generally light on alfalfa. (Burbutis). OKLAHOMA - Light in alfalfa in south central area. (Van-Cleave, Meharg). NEW MEXICO - Generally light in alfalfa fields in Chavez and Eddy Counties. (N. M. Coop. Rpt.). UTAH - Moderately numerous at Nephi and north Ogden. (Knowlton).

ALFALFA LOOPER (Autographa californica) - OREGON - Infestations much less than during 1958 in Milton-Freewater area on June 15. (Hanna).

CLOVER HEAD CATERPILLAR (Grapholitha interstinctana) - ILLINOIS - Larvae infesting 0-20 percent of clover plants in new seedlings in northern half of State. Feeding in central bud and crown and killing new shoots. (Ill. Ins. Rpt.)

GREEN CLOVERWORM (Plathypena scabra) - DELAWARE - Becoming more common in alfalfa in New Castle and Kent Counties. (Burbutis). ILLINOIS - Larvae 0-20 per 100 sweeps in clover fields in northern half of State. (Ill. Ins. Rpt.). SOUTH DAKOTA - Larval counts in alfalfa and clover fields in east central area as high as 1 per 10 sweeps. (Mast).

THRIPS (undetermined) - NORTH DAKOTA - In Grand Forks County, thrips more numerous than during the past 4 years. Counts average 3-4 adults per stem with 88 percent of stems infested in early-planted fields. In late-planted fields, counts averaged 2 per stem with 76 percent of plants infested. In other eastern areas, numerous barley fields with 60-100 percent of plants infested. An average of 1-7 adults present per infested barley stem in boot stage of development. (N. D. Ins. Rpt.). UTAH - Extremely numerous on fall wheat and alfalfa in Nephi-Mona area of Juab County. (Knowlton). KANSAS - Damaging corn and sorghum in Finney and Lane Counties. (DePew). INDIANA - Numerous enough on corn in scattered areas to warrant control. (Osmun). VIRGINIA - Damaged corn in fields in Lee and Caroline Counties. (Amos, Lyle, Eager). GEORGIA - Light to moderate infestations on peanuts in 19 peanut-growing counties. (Johnson).

THRIPS - ALABAMA - Frankliniella fusca continues to damage peanuts in southeastern area. Most early-planted peanuts damaged to some extent. Infestations increasing on late-planted crops. (Grimes). DELAWARE - Sericothrips variabilis remains common on soybeans throughout most of State, but apparently not building up. (Burbutis). OKLAHOMA - Frankliniella sp. heavy, 50 per linear foot, in peanut field in Bryan County. (Vinson). TEXAS - Frankliniella sp. reported in Randall County, migrating from cotton to sorghum and causing minor damage. (Daniels). ARIZONA - Frankliniella occidentalis very heavy on alfalfa in central and south-eastern counties. (Ariz. Coop. Sur.).

SOYBEAN CYST NEMATODE (Heterodera glycines) - VIRGINIA - Ten additional infestations found during May in Nansemond County. Since beginning of program in State, 36 properties involving 1,881 acres have been found infested in Nansemond County. (PPC, East. Reg.). NORTH CAROLINA - In Gates County, 5 additional properties consisting of 70 acres found infested during May. (PPC, So. Reg.). MISSOURI - Two new infestations found in Dunklin County and 20 new infestations identified in Pemiscot County. Damage symptoms prevalent in regulated areas of Pemiscot County where rain has been deficient. (PPC, Cent. Reg., May Rpt.).

RED-NECKED PEANUTWORM (Stegasta basqueella) - OKLAHOMA - Essentially all peanut shoots in 5 fields in Caddo County damaged. All stages and instars present. (Walton, Manley).

A GRAPE COLASPIS (Colaspis sp.) - NORTH CAROLINA - Severe infestation of larvae on roots of soybeans in 5-acre field in Hyde County. (Baucom, Farrier). MISSOURI - Damage appearing in southwest area on corn that followed lespedeza and other legumes. (Kyd, Thomas, Munson).

A WEEVIL (*Sitona* sp.) - ILLINOIS - Damaging soybeans in Macoupin County, as many as 20-30 per linear foot of row. (Ill. Ins. Rpt.).

JAPANESE BEETLE (*Popillia japonica*) - DELAWARE - Present on soybeans in Kent County. (Burbutis). VIRGINIA - Heavy on corn in Middlesex County, June 5. (Boswell).

FRUIT INSECTS

CODLING MOTH (*Carpocapsa pomonella*) - MASSACHUSETTS - Activity split into two peaks due to low temperatures and rain. (Crop Pest Cont. Mess.). DELAWARE - Very low throughout State. (Kelsey). NEW JERSEY - Pupation complete in southern counties. No emergence observed. (Ins. Dis. Newsl.). INDIANA - Larval entries light in Vincennes area commercial orchards. (Hamilton). WISCONSIN - Adults emerged at end of first week of June in Door County and entries were earlier than expected in the Gays Mills area. (Wis. Coop. Sur.). MISSOURI - Very few in the northwest area and no evidence of activity from other areas of State. (Wkly. Rpt. Fr. Grs.).

ORCHARD MITES - INDIANA - *Panonychus ulmi* and *Tetranychus telarius* building up in northern area. (Matthew). WISCONSIN - *P. ulmi* first-generation eggs hatching June 12 in Door County. (Wis. Coop. Sur.). MISSOURI - Spider mites vary from very light to moderate over State. (Wkly. Rpt. Fr. Grs.). UTAH - Scattered injury by *Bryobia rubrioculus* to apple and peaches reported in central and northern areas. (Davis, Knowlton). SOUTH CAROLINA - *P. ulmi* and *T. telarius* appearing in some Piedmont orchards. (Nettles et al.).

APPLE APHID (*Aphis pomi*) - INDIANA - Several infestations in Vincennes are heavy enough to warrant control. (Hamilton). WISCONSIN - Light, but general, in Door County, June 12. (Wis. Coop. Sur.). PENNSYLVANIA - Moderate on new growth of apple trees most orchards in Snyder County. (Gesell). DELAWARE - Decreasing generally most areas. (Kelsey).

WOOLLY APPLE APHID (*Eriosoma lanigerum*) - NEW MEXICO - Building up on apple trees in Hondo Valley of Lincoln County. (N. M. Coop. Rpt.).

EUROPEAN APPLE SAWFLY (*Hoplocampa testudinea*) - RHODE ISLAND - Collected in North Scituate and Kingston. Larvae in fruit, June 18. (Hansen).

ORIENTAL FRUIT MOTH (*Grapholitha molesta*) - INDIANA - Heavy twig injury in a few orchards, especially in Decker area. Light in most orchards in Vincennes area. (Hamilton). OHIO - First-brood moths emerging in northern area, June 17. (Rings). NORTH CAROLINA - Probably this species injuring twigs of peach trees in Washington and Alamance Counties. (Harris, Farrier).

LESSER PEACH TREE BORER (*Synanthedon pictipes*) - OHIO - Twenty-seven adults emerged from 31 trees in an orchard in Doylestown during June 12-18. (Rings).

GREEN PEACH APHID (*Myzus persicae*) - WASHINGTON - Spring migrants leaving peach April 30 and continuing through June 10 in eastern area. (Landis).

PLUM CURCULIO (*Conotrachelus nenuphar*) - GEORGIA - First-generation adults began to deposit second-generation eggs in peaches, June 12. (Snapp).

WESTERN CHERRY FRUIT FLY (*Rhagoletis cingulata indifferens*) - IDAHO - First adult of season trapped in Weiser area, May 19. (Scott).

TENT CATERPILLARS (*Malacasoma* spp.) - MONTANA - Scattered over State on chokecherry and yellowberry currant. Not as abundant as last year. (Roemhild, June 1-15).

LESSER APPLEWORM (Grapholitha prunivora) - CALIFORNIA - Moderate on cherries in Delta area, Shasta County. (Cal. Coop. Rpt.).

BLACK CHERRY APHID (Myzus cerasi) - WASHINGTON - Moderate infestation continuing because of cool weather. Damage moderate and spotty at Wenatchee. (Anthon).
UTAH - Causing concern throughout central and northern Utah. (Davis, Knowlton).

SCALES - FLORIDA - Pulvinaria innumerabilis heavy on plum at DeLeon Springs during May. (Fla. St. Plt. Brd.). OHIO - Lecanium corni 95 percent hatched by June 16 in Clyde area. (Rings). MISSOURI - Aspidiotus forbesi crawlers noted near Cape Girardeau, June 14. First of season. (Wkly. Rpt. Fr. Grs.). WISCONSIN - Lepidosaphes ulmi crawlers emerging first week in June in Door County. (Wis. Coop. Sur.).

FALL WEBWORM (Hyphantria cunea) - LOUISIANA - Light to moderate on pecans statewide. (Spink). TEXAS - Medium to heavy on pecan in Houston County. (Garner).
NEW MEXICO - Heavy on native walnuts and pecans in Carlsbad, Hobbs and Hondo Valley. (N. M. Coop. Rpt.).

BLACK PECAN APHID (Melanocallis caryaefoliae) - NEW MEXICO - Heavy on pecan trees in Las Cruces. Honeydew becoming a nuisance. (N. M. Coop. Rpt.).

CITRUS BLACKFLY (Aleurocanthus woglumi) - TEXAS - Inspections made on 37,773 trees on 2,399 properties in Cameron, Hidalgo and Webb Counties during May. (PPC, Southern Reg.) MEXICO - At Sabinas Hidalgo, Nuevo Leon, the second light infestation of the year was found, consisting of 6 trees on one property. Eight trees lightly infested were located in the Municipio of Montemorelos. At Linares, 43 trees on one property were found infested and at Hualahuises, one infested tree was found. Two lightly infested trees on one property were found at Hidalgo, Tamaulipas. (PPC, Southern Reg., May Rpt.).

WHITEFLIES - FLORIDA - Very heavy on citrus in St. Petersburg area and in all citrus nurseries in East Hillsborough area during May. (Fla. St. Plt. Brd.).

MEALYBUGS - FLORIDA - General in citrus nurseries in East Hillsborough County and heavy at Tallavast during May. (Fla. St. Plt. Brd.).

MEDITERRANEAN FRUIT FLY (Ceratitis capitata) - Trap inspections of 56 traps in Baldwin, Houston and Mobile Counties, ALABAMA; 8,362 traps in FLORIDA and of traps in Beaufort and Charleston Counties, SOUTH CAROLINA, were negative during May. (PPC, So. Reg.).

MEXICAN FRUIT FLY (Anastrepha ludens) - TEXAS - Total of 3,199 trap inspections made during May. Five positive specimens, 4 nongravid females and one male found in 2 traps in Hidalgo County. (PPC, So. Reg.).

CITRUS RED MITE (Panonychus citri) - LOUISIANA - Heavily infesting citrus in Plaquemines Parish. Averaged 50 per leaf. (Spink).

Citrus Insect Situation, Lake Alfred, Florida, Second Week in June - PURPLE SCALE activity declined slightly this week. Will resume upward trend next week, but not greatly, from current low level. FLORIDA RED SCALE rose sharply this week. Further rise to very high level is expected during next two weeks. CITRUS RED MITE activity decreased this week. Will remain near current level through June and then decline. CITRUS RUST MITE increased in activity this week. Strong upward trend will take infestations to high level in July and August. BLACK SCALE activity increased this week and will continue high for several weeks. (Simanton, Thompson, Johnson).

A LEAFHOPPER (Erythroneura elegantula) - ARIZONA - Second generation appearing in commercial vineyards in Maricopa County. (Ariz. Coop. Sur.).

GRAPE SCALE (Aspidiotus uvae) - MISSOURI - Crawlers active in vineyards in Independence area. (Wkly. Rpt. Fr. Grs.).

TRUCK CROP INSECTS

SEED-CORN MAGGOT (Hylemya cilicrura) - WASHINGTON - Adults unusually abundant this spring on potato foliage, particularly at Satus, Yakima County. (Landis). CALIFORNIA - Probably this species moderate on green onions in Salinas area, Monterey County. (Cal. Coop. Rpt.). OREGON - Caused more than normal damage to sweet corn and bean seedlings in Willamette Valley. (Every). IDAHO - Heavy with considerable damage to potato seed pieces throughout Minidoka County. (Priest).

Potato Psyllid Survey - The fourth survey in the summer breeding area of Colorado, Wyoming and Utah was made the week of June 15-19. The weather was generally good and lycium was well developed in all areas. Psyllid populations per 100 sweeps averaged 2.5 in Salt Lake-Provo area of Utah; 49.3 in Ault-Greely, 21.1 in Pueblo-LaJunta, 1.6 in Salida and 0.27 in Grand Junction area of Colorado. Counts in Wyoming averaged 3.6 in Laramie and in Torrington and none in Green River-Rock Springs area. (PPC).

POTATO PSYLLID (Paratrioza cockerelli) - UTAH - Small numbers present generally on lycium. Two per 50 sweeps at Price, 7 per 50 sweeps at Gunnison and one per 50 sweeps at Spanish Fork and Sandy. (Knowlton). COLORADO - Adults and nymphs very high on lycium in Arkansas Valley counties, particularly Prowers and Bent. No strong movement to potatoes and tomatoes. Low in northeastern area. (Colo. Ins. Sur.).

POTATO LEAFHOPPER (Empoasca fabae) - NORTH DAKOTA - Small numbers in east central potato fields. (N. D. Ins. Rpt.). WISCONSIN - Nymphs and adults general on unsprayed potatoes. (Wis. Coop. Sur.).

SIX-SPOTTED LEAFHOPPER (Macrosteles fascifrons) - NORTH DAKOTA - Light in east central potato fields. (N. D. Ins. Rpt.).

POTATO APHID (Macrosiphum solanifolii) - RHODE ISLAND - First activity of season noted in Kingston area, June 15. (McDowell, Veilleux).

GREEN PEACH APHID (Myzus persicae) - CALIFORNIA - Moderate on escaped lettuce along ditch banks in Watsonville area, Santa Cruz County. (Cal. Coop. Rpt.). WASHINGTON - Much heavier than last year. Now on potatoes, weeds, beets and other crops. (Landis).

BLISTER BEETLES (Epicauta spp.) - LOUISIANA - Fairly heavy but localized infestations on potatoes in Caddo Parish. (Spink). NEW MEXICO - Damaging tomatoes in Lea County. (N. M. Coop. Rpt.).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - WASHINGTON - Injury to potatoes beginning at Othello, Yakima and Quincy. Adults abundant, eggs being deposited on solanaceous weeds as well as potatoes. (Landis). NORTH DAKOTA - Light, with a slight increase in numbers over last year, in Walhalla, Pembina County. (N. D. Ins. Rpt.). IDAHO - Adults abundant on weeds throughout Minidoka County. (Priest).

THREE-LINED POTATO BEETLE (Lema trilineata) - RHODE ISLAND - Eggs hatching in southern area. (Hansen).

CUCUMBER BEETLES (Acalymma vittata and Diabrotica undecimpunctata howardi) - DELAWARE - Common to prevalent on cucumbers and squash in Sussex County. (Burbutis). MARYLAND - Medium to heavy on cucumbers and canteloups on both sides of the Chesapeake Bay. (U. Md., Ent. Dept.).

POTATO FLEA BEETLE (Epitrix cucumeris) - NORTH DAKOTA - Light to moderate in east central area potato fields. Injury noticeable in field margins of many fields. (N. D. Ins. Rpt.). DELAWARE - Common in some potato fields in Kent County and prevalent on one field of beans in Sussex County. (Burbutis).

EUROPEAN CORN BORER (Pyrausta nubilalis) - VIRGINIA - Damaging potato vines locally in Charlotte and King and Queen Counties. (Barbour, Allen). MARYLAND - Numerous heavy infestations in potatoes in Worcester and Somerset Counties. (U. Md., Ent. Dept.).

POTATO TUBERWORM (Gnorimoschema operculella) - ARIZONA - Larvae infesting potatoes in Ligurta area of Yuma County. First known occurrence in potato tubers in State. (Ariz. Coop. Sur.).

TOMATO FRUITWORM (Heliothis zea) - LOUISIANA - Heavy on tomatoes in Plaquemines and St. Bernard Parishes. (Spink). NORTH CAROLINA - Light injury to bean pods in fields in Duplin County. (Farrier).

PEA WEEVIL (Bruchus pisorum) - WASHINGTON - Adults entering fields of peas during warm days in Whitman County, especially on June 11 and 12. An estimated 3,500 acres have been border treated (15-40 percent of total field area) by airplane plus lesser amount by ground rig. (Johansen). OREGON - Infestations normal in eastern area, except for fields at higher elevations, where they are heavier. (Hanna).

PEA APHID (Macrosiphum pisi) - WASHINGTON - Populations very low in most pea fields to date. (Johansen). OREGON - Building up slowly in eastern area. (Hanna). COLORADO - General through eastern counties and western area. (Colo. Ins. Sur.). MINNESOTA - Generally light on peas in most areas, the highest counts being found in north central district. (Minn. Ins. Rpt.). WISCONSIN - Expected to be more prevalent in peas in northeastern counties. (Wis. Coop. Sur.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - ALABAMA - Extensive damage to peas and beans in Houston, Geneva, Dale, Henry and Coffee Counties. (Grimes). COLORADO - Appearing in numbers along foothills area, Larimer and Boulder Counties. (Colo. Ins. Sur.).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - FLORIDA - Severe damage to field peas at Pierson during May. (Fla. St. Plt. Brd.).

LEAF MINERS - FLORIDA - Did considerable damage to beans, okra and field peas in Marianna district during May. (Fla. St. Plt. Brd.).

BEAN LEAF BEETLE (Cerotoma trifurcata) - DELAWARE - Adults abundant on beans, causing moderately heavy injury in Sussex County. (Burbutis).

BEAN APHID (Aphis fabae) - OREGON - After early buildup, populations remaining static or reduced. (Every).

WIREWORMS - IDAHO - Severely damaging sugar beets throughout Franklin County. More general and severe than in any previous year. (Roberts).

SUGAR-BEET ROOT MAGGOT (Tetanops myopaeformis) - MONTANA - Scattered damage in Yellowstone Valley; one field entirely eliminated. (Roemhild, June 1-15).

BEET WEBWORM (Loxostege sticticalis) - NORTH DAKOTA - Adults numerous in eastern area and at other scattered locations over State. (N. D. Ins. Rpt.).

CABBAGEWORMS - PENNSYLVANIA - Pieris rapae adults numerous in Cumberland and Franklin Counties. (Negley). GEORGIA - Trichoplusia ni heavy on greens in Houston County. (Johnson).

SWEETPOTATO FLEA BEETLE (Chaetocnema confinis) - TENNESSEE - Heavy damage to sweetpotatoes in Knox County. (Bennett, June 15).

GOLDEN TORTOISE BEETLE (Metritona bicolor) - TENNESSEE - Heavy damage to sweetpotatoes in Knox County, June 15. (Bennett).

THRIPS (Frankliniella sp.) - TEXAS - Light to medium on onions in Deaf Smith County. (Texas Coop. Rpt.).

ONION MAGGOT (Hylemya antiqua) - WASHINGTON - Adults numerous in western area. Some fields severely damaged. (Howitt). OREGON - Active in eastern area during latter part of May and first of June. Activity extremely light in Willamette Valley. (Crowell). IDAHO - Heavy infestation in seed onion field near Buhl. First generation 70-80 percent pupated in southwestern area. About 7 percent emergence to date. Damage to fields lessening due to reduced populations. (Barr, Homan, Scott). MASSACHUSETTS - All stages in onion fields. Peak emergence and oviposition will occur during next 2-3 weeks. (Crop Pest. Cont. Mess.).

ASPARAGUS BEETLES (Crioceris spp.) - MONTANA - Causing damage near Billings. (Roemhild, June 1-15). UTAH - Caused moderate damage to asparagus in Davis, Weber and Cache Counties. (Knowlton).

A LOOPER (Rachiplusia ou) - INDIANA - First record from Jasper County, June 11. Beginning to occur on mint in northern area. (Gould).

HOP APHID (Phorodon humuli) - OREGON - Early season control necessary in some yards. (Morrison).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - NEW JERSEY - Heavy in widely separated fields, with serious damage to strawberries. (Ins. Dis. Newsl.). WASHINGTON - Light in margins of potato fields at Quincy, but heavier than usual for this time of year. (Landis).

STRAWBERRY LEAF ROLLER (Ancylis comptana fragariae) - UTAH - Above normal, damage moderate in Salt Lake, Utah and Cache Counties. (Davis, Knowlton).

STALK BORER (Papaipema nebris) - VIRGINIA - Previously reported on strawberries. Det. by H. W. Capps. (Hofmaster). NORTH CAROLINA - Boring into stalks of tomato plants locally in Moore County. (Wood, Farrier).

SPITTLEBUGS - IDAHO - Nymphs becoming abundant on strawberries in Moscow area. (Barr).

SLUGS - WASHINGTON - Mostly Arion ater and Agriolimax agrestis extremely numerous in western area. Damage heavy to ripened strawberries. Losses up to 75 percent on first picking. (Howitt).

GARDEN CENTIPEDE (Scutigera immaculata) - WASHINGTON - Widely scattered damage to several crops west of the Cascade Mountains. (Howitt).

TOBACCO INSECTS

BUDWORMS (Heliothis spp.) - VIRGINIA - Generally light on tobacco in Pittsylvania County. (Dominick). GEORGIA - Light to moderate on tobacco in 13 tobacco-growing counties. (Johnson). SOUTH CAROLINA - Found in all fields inspected. (Nettles et al.).

HORNWORMS (Protoparce spp.) - VIRGINIA - Light on tobacco in Pittsylvania County. (Dominick). MARYLAND - Eggs and larvae increasing on tobacco generally, throughout southern area. (U. Md., Ent. Dept.).

GREEN PEACH APHID (Myzus persicae) - VIRGINIA - Increasing on tobacco in some Pittsylvania County fields. (Dominick). MARYLAND - Light on tobacco in northern Calvert County. (U. Md., Ent. Dept.).

THRIPS - VIRGINIA - Populations greatly decreased on tobacco during past week. (Dominick).

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - VIRGINIA - Moderate on tobacco plants in some fields in Cumberland County. (Seay). GEORGIA - Light to moderate on tobacco in Ware, Tattnall and Bulloch Counties. (Johnson). MARYLAND - Generally light on tobacco in Prince Georges, Calvert and St. Marys Counties. (U. Md., Ent. Dept.).

WIREWORMS - SOUTH CAROLINA - Damage to tobacco very common in Marion County. Some damage reported in Marlboro County. (Nettles et al.).

COTTON INSECTS

BOLL WEEVIL (*Anthonomus grandis*) - NORTH CAROLINA - Punctured squares ranged as high as 30-50 percent in some untreated fields in lower southeastern area. Populations low and spotty in Piedmont, central and northern areas. Treatments being applied in southeast. (Cott. News Lett.). SOUTH CAROLINA - Activity curtailed by hot, dry weather in Florence. First-generation adults not yet emerging, but survivors very active. Controls still being applied. (Fye et al.). GEORGIA - Infestation counts made in 45 southern cotton fields. Percent punctured squares ranged 4-31, averaging 14 percent. (Johnson). ALABAMA - Increasing most sections of State. Infestations in several southeastern counties averaged 20.37 percent, ranging 8-55 percent. First-generation adults should begin emerging around June 28 or 29. (Grimes). MISSISSIPPI - Punctured squares ranged 0-13 percent with average of 3.6 percent in delta counties. Populations down from past two weeks. (Merkl et al.). LOUISIANA - Weevils ranged 0-2 per 100 feet of row in 4 cotton fields in Tensas Parish. In St. Martin Parish, 8 percent of squares found punctured. First-generation adults appearing in southern area. (Spink). In Madison Parish, square infestation averaged 18 percent. The average number of weevils per acre was 125 with a range of 0-1,250. Percent survival in hibernation cages to June 19 was 2.88 compared with 4.30 at same time in 1958. (Smith et al.). TENNESSEE - Two fields found infested of 50 surveyed in McNairy County, averaging 50 per acre. (Locke). ARKANSAS - Numbers low. (Ark. Ins. Rpt.). TEXAS - Activity increased over State with isolated "hot spots". (Gaines). Percent square infestation averaged 46 in untreated fields and 18.7 treated fields in McLennan and Falls Counties with an overall average of 21.6 percent. Very few fields producing enough squares for records. First-generation adults appearing in few early-planted fields. Adults averaged 45 per acre in treated and untreated fields. (Parenchia et al.). OKLAHOMA - Averaged 2 per 100 terminals in 2 of 3 Choctaw County fields checked (Goin) and ranged 0-2 per plant, with 0-3 punctured squares per plant in a cotton field in Bryan County (Vinson).

BOLLWORMS (*Heliothis* spp., et al.) - SOUTH CAROLINA - Found occasionally in Florence area but no major damage reported. Moth flight increasing. (Fye et al.). GEORGIA - Egg counts made in 45 southern cotton fields. Counts ranged 2-20 per 100 terminals, averaging 8 per 100 terminals. Larval counts ranged 0-9 per 100 terminals, averaging 3 per 100 terminals. (Johnson). ALABAMA - Continue to increase most areas of State. Infestation averaged 9.95 percent in several southeastern counties, ranging 0-20 percent. Most larvae from one-fourth to one-half inch in length. Egg counts 0-64 per 100 terminals. (Grimes). MISSISSIPPI - Infestations present a potential threat to early-squaring cotton in delta counties. Eggs and small larvae general. Eggs ranged 1-27 and young larvae 1-13 per 100 terminals. (Merkl et al.). LOUISIANA - Eggs ranged 1-3 per 100 feet of row in cotton in terminals in 4 fields in Tensas Parish. (Spink). Square infestations averaged 3 percent in infested fields in Madison Parish. Eggs and small larvae rather general. (Smith et al.). ARKANSAS - Eggs and larvae present, but being controlled by treatments or beneficial insects. (Ark. Ins. Rpt.). OKLAHOMA - Populations 0.2 per linear foot in 1 of 3 fields in Choctaw County (Goin) and 0.06 per linear foot in field in Jefferson County (Hatfield). TEXAS - Eggs and young larvae observed in many areas with some controls being applied. (Gaines). Eggs averaged 1.1 and larvae 0.3 per 100 terminals in 79 fields in McLennan and Falls Counties. Square injury averaged 1.1 percent in 10 fields. (Parenchia et al.). NEW MEXICO - Light infestation in Chaves and Eddy Counties. (N. M. Coop. Rpt.). ARIZONA - Continuing to increase in Yuma County, with heavy damage reported in some Yuma Valley fields. Also increasing some Pinal and Maricopa County fields. (Ariz. Coop. Rpt.). CALIFORNIA - Activity continues in stub and planted cotton. Egg counts low, few fields required treatments in Imperial County. (H. Schulback).

THRIPS - MISSOURI - Severe injury in Pemiscott, southern half of Dunklin and extreme southern New Madrid Counties. Counts 8-12 per plant early in week, but dropped to 3-4 by end of week. (Kyd, Thomas, Munson). TENNESSEE - Caused severe damage so far this season in western area, but damage tapering off. (Locke).

MISSISSIPPI - Populations remain heavy on young cotton in delta counties. (Merkl et al.). TEXAS - Continue to be a problem some sections of State, especially in north and south plains where heavy infestations were noted. (Gaines). OKLAHOMA - Several fields show medium to heavy damage in south central area (VanCleave) and light to heavy damage in Carter, Stephens, Garvin, McClain and Grady Counties (Pela). Counts 0-4 per plant in Bryan and Aoka Counties (Vinson), 3-10 per plant in Choctaw County (Goin), 2-10 in Caddo and Washita Counties (Hudson) and 0.3-1 per linear foot in Jefferson and Tillman Counties (Hatfield). ARIZONA - Heavy in many fields in southeast counties, particularly in Willcox area of Chochise County. (Ariz. Coop. Sur.).

FLEAHOPPERS - ALABAMA - Limited number of Psallus seriatus observed in Houston, Geneva and Pike Counties. (Grimes). TEXAS - P. seriatus populations continue to be variable in State with some heavy migrations occurring and some infestations leveling off due to weather conditions which slowed maturing of host plants. (Gaines). Infestation averaged 18.3 per 100 terminals in 25 untreated fields and 12.5 in 54 treated fields with overall average of 13.6 in McLennan and Falls Counties. (Parenchia et al.). OKLAHOMA - P. seriatus averaged up to 5 percent infestations in cotton fields in south central area (VanCleave). None found in Carter, Stephens, Garvin, McClain and Grady Counties. (Pela). NEW MEXICO - Rhinacloa forticornis were light with occasional moderate to heavy infestations on cotton in Chaves and Luna Counties. (N. M. Coop. Rpt.). ARIZONA - Spanogonicus albofasciatus heavy in central and southeastern counties. Average number per 100 sweeps in some areas as follows: Cochise County - Kansas Settlement, 42; Stewart, 30; Bowie, 20; Graham County - 25; Greenlee County - 15; Maricopa County - 25; Pinal County - 25. (Ariz. Coop. Sur.).

PINK BOLLWORM (Pectinophora gossypiella) - MEXICO - In western area, bloom inspections initiated on approximately 30,000 acres of cotton in Mexicali, Baja California, and 300 acres in San Luis, Sonora. All results negative. Thirteen traps located in Mexicali and San Luis areas were operated during May; all trap inspections negative. (PPC, Mex. Reg., May Rpt.). TEXAS - Bloom inspections, which began in the lower Rio Grande Valley on May 13, indicate lighter infestations than for several years. (PPC, So. Reg., May Rpt.).

APHIDS - GEORGIA - Light infestations of Aphis gossypii in cotton Colquitt, Mitchell, Miller, Bulloch and Jenkins Counties. (Johnson). TENNESSEE - Severe infestation of a root aphid caused loss of stand in Dyer County with some spotted damage occurring in other fields in western area. (Locke). OKLAHOMA - Counts of A. gossypii were 10-30 per plant in 2 or 3 fields in Choctaw County (Goin), 0-6 per plant in 2 fields in Bryan County (Vinson) and light in fields checked in Carter, Stephens, Garvin, McClain and Grady Counties (Pela). NEW MEXICO - Heavy, spotty infestations of A. medicaginis on cotton in Chaves and Eddy Counties. (N. M. Coop. Rpt.).

TARNISHED PLANT BUG (Lygus lineolaris) - LOUISIANA - Ranged 2-6 per 100 feet of row in 4 fields in Tensas Parish. (Spink). Ranged 3-34 per 100 sweeps with average of 10 per 100 sweeps in Madison Parish. Some damage occurring and several growers treating. (Smith et al.). MISSISSIPPI - Number one problem to cotton in delta counties at present. Heavy blasting of early squares common in older cotton not treated. Counts range 1-30 per 100 sweeps with an average of 10.2 per 100 sweeps. Controls needed if early crop is to be set. (Merkl et al.).

LYGUS BUGS (Lygus spp.) - NEW MEXICO - Light in cotton in Luna, Dona Ana, Chaves and Eddy Counties. (N. M. Coop. Rpt.). ARIZONA - Continuing to increase across State in cotton with average counts of 15-20 per 100 sweeps. (Ariz. Coop. Rpt.). CALIFORNIA - Increasing many fields. Adults moving in from alfalfa fields in Imperial County (Schulback) and present but not economic in Tulare County (A. G. George).

SPIDER MITES - NORTH CAROLINA - Severe infestation of Tetranychus sp. in cotton field in Lincoln County. (Jones). MISSOURI - Marginal infestations by Tetranychus spp. very common throughout southeast. Counts range 15-95 per leaf. Some marginal defoliation present in heavily infested areas. (Kyd, Thomas, Munson). TENNESSEE - Spider mites found along edges of fields that had infestations in years past in western area. (Locke). ARIZONA - Heavy localized spots of spider mites in some cotton fields in Kansas Settlement area of Cochise County. (Ariz. Coop. Sur.). CALIFORNIA - Spider mites in general are light in Imperial County with considerable predator activity. In Tulare County, mite populations spreading in untreated fields. In Fresno County, mites are earlier this season and increasing sharply in several areas. (Schulback, Rudd).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - TENNESSEE - Larvae, all sizes, found in cotton in western area. Not heavy, but most fields infested. Damage very light at present. (Locke).

BEET ARMYWORM (Laphygma exigua) - ARIZONA - Populations increased some cotton fields in Marana area of Pima County. Counts average 3 larvae per 10 plants, some feeding damage heavy in spots. (Ariz. Coop. Sur.).

CABBAGE LOOPER (Trichoplusia ni) - TEXAS - Infestations caused some concern in central area as ragging of leaves was observed. (Gaines). CALIFORNIA - Medium on cotton in Bard area of Imperial County. (Cal. Coop. Rpt.).

COTTON LEAF PERFORATOR (Bucculatrix thurberiella) - CALIFORNIA - Spotty, with occasional flareups. Occurrence primarily in north end of Imperial Valley, Imperial County. (H. Schulback).

GRASSHOPPERS - TEXAS - Continue to cause concern as many areas reported heavy infestations on or near margins of fields. (Gaines). NEW MEXICO - Damaging cotton in Lea and Quay Counties. (N. M. Coop. Rpt.).

A GRAPE COLASPIS (Colaspis sp.) - ARIZONA - Light infestations of adults in Greenlee County cotton. (Ariz. Coop. Sur.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana) - PENNSYLVANIA - Pupating on red pine in Fayette County, June 9. (Drooz). INDIANA - Adult emergence about 80 percent complete at Bristol, Elkhart County. (Schuder).

JACK-PINE BUDWORM (Choristoneura pinus) - WISCONSIN - Populations generally light. Larvae ranged from third to fifth instars in Burnett and Douglas Counties by June 9 and in fifth instar in Juneau and Jackson Counties by June 15. (Wis. Coop. Sur.). MINNESOTA - Now in third instar in Koochiching County. (Minn. Ins. Rpt.).

SPRUCE BUDWORM (Choristoneura fumiferana) - PENNSYLVANIA - Beginning to oviposit on Virginia pine in Perry County. (Drooz). MINNESOTA - Aerial spraying of 7,280 acres of spruce and balsam in International Falls area completed. Post-spray survey indicated good control. Now in sixth instar and some pupation begun by June 15. Heavy defoliation now apparent throughout much of infested areas appears comparable to that of 1958. (Minn. Ins. Rpt.).

ZIMMERMAN PINE MOTH (Dioryctria zimmermani) - INDIANA - Infestations in untreated pine plantings as high as 35 percent in La Porte County. Larvae in late stages and about 50 percent have entered first whorl. (Schuder).

AN OLETHREUTID (Eucosma gloriola) - PENNSYLVANIA - Lightly infesting Douglas-fir in Knauers area, Berks County. About 2 percent pupation on Scotch pine in same area. (Drooz).

DOUGLAS-FIR ENGRAVER (Scolytus unispinosus) - CALIFORNIA - Caused partial and complete kill of groups of 4-5 Douglas-firs in an 80-acre stand in Baechtel Creek area, Mendocino County. Damage associated with heavy logging in past two years. (P. G. Lowell).

BARK BEETLES - CALIFORNIA - Ips radiatae causing considerable damage in a 20-acre Monterey pine plantation in San Mateo County. Many trees dead and dying. Infestation decreasing. (J. C. Dowakin). WISCONSIN - Scattered individual jack pines heavily attacked by undetermined species in northwest area. Some trees have been killed. (Wis. Coop. Sur.). SOUTH CAROLINA - Dendroctonus frontalis killed several pines in the Hampton area. (Nettles et al.). TEXAS - D. frontalis population buildup was rapid in Hardin and Liberty Counties. Aerial surveys showed over 30 spots of infestation, some containing 50 brood trees. Control project was re-activated, effective June 1, with U. S. Forest Service participating. (Young).

WHITE-PINE WEEVIL (Pissodes strobi) - VIRGINIA - Larvae killed leaders of white pines on a lawn in Roanoke County (Amos, Oliver) and damaged some pines in Montgomery County (Amos).

PINE CHAFER (Anomala obliqua) - PENNSYLVANIA - Averaged 5 per tree on sparse growth of Scotch pine in Cambria County, surrounded by heavy plantings. Heavy plantings with only a few along adjacent margins. Terminals and upper laterals have lower two-thirds of needles on new growth destroyed. (Udine).

SPITTLEBUGS - WISCONSIN - Few fourth-instar Aphrophora parallela nymphs present in Burnett County, June 8. Some third-instar nymphs of A. saratogensis present in Burnett and Sawyer Counties, June 9. Hatching completed in all northeastern counties by same date. Most nymphs in third instar in Vilas County, June 18. Populations of latter species appear high in northeast areas. (Wis. Coop. Sur.).

COOLEY SPRUCE GALL APHID (Chermes cooleyi) - MONTANA - Common on spruce in ornamental plantings. (Roemhild, June 1-15). RHODE ISLAND - Unusually abundant in nursery stock in Wakefield, June 12. (Kerr).

PINE BARK APHID (Pineus strobi) - MINNESOTA - Infested several acres of red pine seedlings at a Willow River nursery. Infestations moderate but appeared to be building up. Controls have been applied. (Minn. Ins. Rpt.).

A WOOLLY APHID - MONTANA - Abundant on alpine fir in ornamental plantings in mountain region east of the Divide and observed on same host in Gallatin National Forest. (Roemhild, June 1-15).

BLACK PINE LEAF SCALE (Aspidiotus californicus) - CALIFORNIA - Causing serious damage to crowns of saw timber sugar pines in Mill Creek area, Mendocino National Forest, and in a 300-600-acre stand in Thompson Peak burn area, Shasta-Trinity National Forest. Mendocino infestation has increased in past 2 years. Apparently the species is potentially much more serious than published results indicate. (R. E. Lang, K. M. Estes, G. B. Eaton).

RED-PINE SAWFLY (Neodiprion nanulus) - WISCONSIN - Larvae a little over half-grown in northwest area, first week of June. Colonies appear smaller than in 1958 and apparently many eggs failed to hatch. Few scattered colonies reported in Langlade, Oconto and Marinette Counties. Larvae approaching cocoon stage in west central area. Cocooning occurred by first week in June in Jackson County and was completed in Adams, Juneau and Washara Counties by June 15. (Wis. Coop. Sur.).

YELLOW-HEADED SPRUCE SAWFLY (Pikonema alaskensis) - MINNESOTA - Common on spruce, especially in open-planted trees in Koochiching County. Defoliation light to moderate. (Minn. Ins. Rpt.).

BAGWORM (Thyridopteryx ephemeraeformis) - MARYLAND - Small larvae becoming noticeable on evergreens in central and southern sections. (U. Md., Ent. Dept.). NORTH CAROLINA - Early-instar larvae infesting junipers in Wake County. (Jones). ALABAMA - Severe defoliation of cedar reported in localized areas of Mobile County. (Lockhart, Seibels). OKLAHOMA - Heavy populations common in Stillwater area. Most larvae in second and third instars. (Price).

BAGWORMS - PENNSYLVANIA - Small bags of Eurukuttarus confederata on trees, rocks, fence posts and other objects in central area of State. This is first time this species has been noticed in this area. (Gesell). UTAH - Apterona crenulella lightly infesting range plants in Logan Canyon and at Laketown in northern part of State. (Knowlton).

CALIFORNIA OAKWORM (Phryganidia californica) - CALIFORNIA - Medium on oaks in Suisun, Solano County. (Cal. Coop. Rpt.).

A CANKERWORM (Paleacrita longiciliata) - CALIFORNIA - Causing severe defoliation of chamise in Lake County and considerable concern as this is principal deer browse, which would cause a serious fire hazard if killed out. (Cal. Coop. Rpt.).

FALL WEBWORM (Hyphantria cunea) - NEW MEXICO - Heavy on poplars in Carlsbad, Hobbs and Hondo Valley. (N. M. Coop. Rpt.).

GYPSY MOTH (Porthetria dispar) - NEW YORK - Spraying was commenced on May 21 and by the end of the month 35,145 acres had been treated in the Oneonta area. (PPC).

MIMOSA WEBWORM (Homadaula albizziae) - ALABAMA - Caused heavy damage to mimosa trees in localized areas of Mobile County. (Lockhart, Seibels). INDIANA - First-generation adult emergence nearly complete at Indianapolis. (Schuder).

TENT CATERPILLARS (Malacosoma spp.) - PENNSYLVANIA - All unemerged M. americanum cocoons examined contained large parasitic larvae which may be Sarcophaga aldrichi. More than half of all cocoons are effected. (Udine). MINNESOTA - Very little evidence of defoliation by M. disstria north of Duluth. (Minn. Ins. Rpt.). WISCONSIN - High larval populations of M. disstria failed to materialize

in northwest Douglas and northern Ashland Counties. Few larvae examined in Ashland County varied from third instar to mature. Parasitism and adverse weather apparently responsible for much of reduction. (Wis. Coop. Sur.).

ELM LEAF BEETLE (Galerucella xanthomelaena) - MARYLAND - Larvae injuring foliage of Chinese elms at University Hills, Prince Georges County. (U. Md., Ent. Dept.). NORTH CAROLINA - Defoliating elms in Craven and Beaufort Counties. (Jones). OKLAHOMA - Limited numbers of first-generation larvae in elms in Stillwater area. Most have reached pupal and adult stages. Second-generation eggs becoming more common in area and hatch has begun. (Price). Larvae ranged 50-75 and adults 75-100 per 100 leaves in elms in Chichasha area. (Pennington). UTAH - Larvae causing damage at Draper and elsewhere in Salt Lake County. (Knowlton). NEVADA - Larvae present in Lovelock, Pershing County. (Bechtel, Snyder).

IMPORTED WILLOW LEAF BEETLE (Plagiodera versicolora) - RHODE ISLAND - Pupae present in Kingston area, June 17. (Kerr).

A SCARABAEID - SOUTH DAKOTA - Causing considerable damage to Salix spp. and Populus spp. in the north Sioux Falls area of Minnehaha County. (Mast).

ELM LEAF MINER (Fenusa ulmi) - DELAWARE - Most larvae have completed development and adults have emerged. Injury noticeable but not very heavy in most areas. (Burbutis).

EUROPEAN ELM SCALE (Gossyparia spuria) - WISCONSIN - Egg laying continuing and hatching has begun, but crawlers have not emerged in Dane-Jefferson County area. (Wis. Coop. Sur.). UTAH - Damaging at Manti, Ephraim and other localities in Sanpete County. (Knowlton). IDAHO - Extremely heavy on elm in Twin Falls area. Large numbers of gravid females present containing fully-developed eggs. No crawlers present. (Gibson).

LACE BUGS (Corythuca spp.) - MARYLAND - C. arcuata moderate to heavy on white oaks in central Prince Georges County. (U. Md., Ent. Dept.). OKLAHOMA - C. ciliata heavy (up to 25 per leaf) on some sycamore and hackberry trees at Woodward (James), ranged up to 6 per leaf on a sycamore at Stillwater (Bieberdorf) and very light on a few sycamores in Sulphur area of Murray County (VanCleave, Meharg).

WOOLLY ALDER APHID (Prociphilus tessellatus) - NEW JERSEY - Abundant on maples in certain areas of Gloucester County. (Ins. Dis. Newsl.). MARYLAND - Infesting silver maples in Prince Georges, Calvert, Caroline and Howard Counties. (U. Md., Ent. Dept.). VIRGINIA - Extremely heavy on silver maple trees in all parts of the State. (Morris). NORTH CAROLINA - Infesting maple leaves in Randolph County. (Scott, Farrier). TENNESSEE - Heavy on maple in Knox and adjoining counties. (Stanley).

SAWFLIES - WISCONSIN - An undetermined species caused almost complete defoliation of a locust tree windbreak in Juneau County by second week of June. Locust in vicinity of Portage, Columbia County, also defoliated. Newly hatched larvae of Pristophora erichsonii present in Juneau County June 11, ranged to third instar at Wisconsin Rapids by June 17, but had cocooned by June 18 at Middleton. (Wis. Coop. Sur.).

FULLER ROSE BEETLE (Pantomorus godmani) - CALIFORNIA - Heavy populations damaging hibiscus in Santa Barbara, Santa Barbara County. (Cal. Coop. Rpt.).

AN AZALEA LEAF MINER (probably Gracilaria azaleella) - NORTH CAROLINA - Injuring Formosa variety azaleas in Duplin County. (Farrier).

APHIDS - DELAWARE - Several large colonies of Longistigma caryae on sycamores in New Castle County. (Bray). MARYLAND - Undetermined species curling leaves of black oak at Takoma Park, Montgomery County. Prociphilus fraxinifolii infesting ash at College Park, Prince Georges County. (U. Md., Ent. Dept.). PENNSYLVANIA - Drepanaphis monelli on horse chestnut in Dauphin County, turning leaves yellow.

(Drooz). Macrosiphum sanbornii fairly abundant on most chrysanthemum plants in south central part of State. (Pepper). FLORIDA - Unspecified species heavy on crapemyrtle in the Monticello district. Also heavy on ixora, viburnum and hibiscus in many nurseries in the Palm Beach district. (Fla. St. Plt. Brd., May Rpt.). UTAH - P. fraxinifolii has damaged a number of trees at Price, Helper, Castle Dale, Ferron, Manti and Spanish Fork. (Knowlton). NEVADA - Heavy infestation of Myzocallis robiniae on locust trees with defoliation occurring in Las Vegas, Clark County. (Zoller). WASHINGTON - Pterocomma bicolor unusually abundant on willow at Othello, Adams County. (Landis).

SCALES - NORTH CAROLINA - Diaspis carueli light on ornamental juniper planting in Wake County. (Scott, Farrier). SOUTH CAROLINA - Pseudaonidia paeoniae heavy on azaleas and camellias in Spartanburg County. (Nettles et al.). FLORIDA - Fiorinia theae numbers somewhat less than usual in the Monticello district; widespread on camellias and some hollies in the Marianna district; built up on camellias in the Ocala district; appeared to be on the decline in the Jacksonville district; and were light to medium on camellias in the Macclenny district. (Fla. St. Plt. Brd., May Rpt.). OKLAHOMA - Heavy populations of Kermes pubescens killing terminal growth on many post oaks throughout south central area. Crawlers active. (VanCleave, Meharg). Medium on oaks in Muskogee County (Washum) and heavy on post oaks in Delaware County (Flora). IDAHO - Abundant general infestation of Lepidosaphes ulmi on ash trees in Preston, with heavy damage. (Roberts).

THRIPS - CALIFORNIA - Frankliniella sp. heavy on peony flowers in Julian, Solano County. (Cal. Coop. Rpt.). FLORIDA - Unspecified species reappearing on crotons after being scarce for several years on these plants in the north Dade district. Heavily infested crotons in Tarpon Springs and St. Petersburg. (Fla. St. Plt. Brd., May Rpt.).

SPIDER MITES - MARYLAND - Oligonychus ununguis infesting hemlock and juniper in Garrett County and arborvitae in Baltimore County. (U. Md., Ent. Dept.). VIRGINIA - Undetermined species heavy on hemlocks in Roanoke, Pulaski and Frederick Counties and on holly bush in Prince Edward County. (Amos et al.). NORTH CAROLINA - Tetranychus sp. infesting roses locally in Orange County and causing severe leaf injury to hydrangea locally in Pasquotank County (Lowery, Farrier). TENNESSEE - Tetranychus sp. heavy on nursery stock in Knox and Blount Counties. (Hammett). MISSOURI - Considerable trouble being experienced on various evergreens in southeast part of State from undetermined species. (Wkly. Rpt. Fr. Gr.). LOUISIANA - Undetermined species heavy on dwarf holly in St. Tammany Parish. (Spink).

EASTERN LUBBER GRASSHOPPER - ALABAMA - Caused considerable damage to amaryllis in southern Mobile County. Infestations increasing. (Seibels).

GYPSY MOTH (Porthetria dispar) - MICHIGAN - During May 1-13, following number of acres treated in following counties: Clinton - 14,177; Eaton - 2,957; Ingham - 2,957. Average coverage was 69.4 percent. (PPC, Cent. Reg.).

INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - CALIFORNIA - Culex tarsalis generally exceptionally light over the State. Populations of 1-9 females taken in traps in Butte and Colusa Counties. (Pub. Hlth. Vec. Cont.). MINNESOTA - Aedes vexans comprised 97.5 percent of all specimens in light trap collections and 93 percent of all biting collections in period of June 7-13. Of 310 larval collections during the same period, 108 contained A. vexans, 100 Culiseta inornata, 81 Culex territans, 75 C. restuans and 45 C. tarsalis. (Minn. Ins. Rpt.).

MOSQUITOES (undetermined) - FLORIDA - Very annoying in the Monticello district and heavy in unsprayed areas of Brevard County. Populations also high in Oak Hill area. Populations were again heavy in the Indian River district, but were very light along the coast in Palm Beach County. Numbers increased in Hillsborough and Pasco Counties. (Fla. St. Plt. Brd., May Rpt.). LOUISIANA - Remain a severe problem throughout the State. (Spink). TEXAS - Heavy and annoying in Hale County. (Texas Coop. Rpt.). WISCONSIN - Extremely annoying in wooded areas in most west central counties. Several species of mosquitoes all but prohibited outside activity after 9. P. M. on north side of Lake Mendota. Complaints numerous on east side of lake, with a few on west side. Most breeding locations are now dry. Outlook is for lower mosquito numbers, but locally troublesome. (Wis. Coop. Sur.). MINNESOTA - During period March 20-June 17, 101,000 acres of confirmed breeding sites have been treated, compared to 99,000 acres for the entire 1958 season. Thirty-one species have been identified this season from light trap, biting and larval collections. (Minn. Ins. Rpt.). WYOMING - Very numerous in Saratoga Valley and Uinta County. (Davison). UTAH - Troublesome to livestock in meadows west of Ephraim, and in the Manti-Freedom area of Sanpete County. Extremely annoying in alfalfa and grain fields in Huntington, Castle Dale and Ferron areas of Emery County and moderate to numerous in Price, Helper and Wellington areas of Carbon County. One horse has died of mosquito-transmitted encephalitis at Panguitch, Garfield County. (Knowlton). CALIFORNIA - Populations expected to be considerably below the 1958 level. (Pub. Hlth. Vec. Cont.).

A SARCOPHAGID (Wohlfahrtia vigil) - MINNESOTA - Immature larvae removed from "reddened elevated bumps" on neck and shoulders of an infant in the St. Peter area, Nicollet County, tentatively identified as this species. This is the third report of this species in man from the State in the past 5-6 years, the last being from a child in the Twin City area in August 1957. (Minn. Ins. Rpt.).

SCREW-WORM (Callitroga hominivorax) - FLORIDA - Infesting livestock June 17 near Lake Placid in Highlands County. This is the first case reported in the southeastern United States eradication area since February 19, 1959. Eradication program leaders emphasized that occurrence of this case points up the necessity for livestock producers in the Southeast to be on the alert for any suspected infestations and to report such cases immediately. (ARS Inf. Serv.).

CATTLE GRUBS (Hypoderma spp.) - WYOMING - Adults bothering cattle in Uinta County. (Davison).

HORN FLY (Siphona irritans) - NEW MEXICO - Averaged 350 per head in one herd prior to spraying. (N. M. Coop. Rpt.). OKLAHOMA - Ranged 250-500 per animal on cattle checked in McCurtain and Pushmataha Counties (Goin), up to 150 per animal in south central area of State (VanCleave), averaged 450 per animal in Tulsa area (Taylor) and averaged 250 per animal in a herd of milking cows in Stillwater area (Henderson, Mount).

STABLE FLY (Stomoxys calcitrans) - OKLAHOMA - Averaged 7 per animal on cattle in the Tulsa area (Taylor) and 3 per animal on milking cows in Stillwater area (Henderson, Mount).

TABANIDS - LOUISIANA - Chrysops spp. remain a severe problem throughout the State. Tabanus sp. averaged 16 per 15-minute collection period in St. Landry, Calcasieu, Caddo and Tensas Parishes. Counts ranged from 204 in St. Landry Parish to 27 in Caddo Parish, per 90 minutes. (Spink). UTAH - Unspecified species troublesome to livestock in meadow areas west of Ephraim and in the Manti-Freedom area of Sanpete County. (Knowlton).

TICKS - OKLAHOMA - Mainly Amblyomma americanum, ranged 15-35 per animal on cattle checked in McCurtain and Pushmataha Counties. (Goin).

STORED-PRODUCT INSECTS

KHAPRA BEETLE (Trogoderma granarium) - MEXICO - One infested property was found in Colonia Coahuila, in the state of Sonora. (PPC, Mex. Reg., May Rpt.).

ANGOUMOIS GRAIN MOTH (Sitotroga cerealella) - ILLINOIS - Adults average 0-10 on surface of 1958 ear corn in Gallatin County. Adult counts ranged 10-100 in Massac, Johnson, Union and Alexander Counties. (Ill. Ins. Rpt.).

BENEFICIAL INSECTS

LADY BEETLES - LOUISIANA - Several species averaged 1,300 per acre of cotton in 4 fields examined in Tensas Parish. (Spink). ILLINOIS - Adults of unspecified species ranged 0-20 per 100 sweeps of clover and alfalfa in northern half of State. (Ill. Ins. Rpt.). SOUTH DAKOTA - Large numbers of Hippodamia spp. adults and larvae in most east central area fields. (Mast). OKLAHOMA - Counts of undetermined species variable in various crops in several areas of State. (VanCleave et al.). COLORADO - Unspecified species building up and reported in numbers in all stages. (Colo. Ins. Sur.). WYOMING - Undetermined species averaged 3 per 100 sweeps of alfalfa in the Saratoga Valley, 4 in the Burntfork area and 3-12 in the Evanston area. (Davison).

BIG-EYED BUGS (Geocoris spp.) - LOUISIANA - Averaged 520 per acre of cotton in 4 fields examined in Tensas Parish. (Spink).

LACEWINGS - ILLINOIS - Larvae of undetermined species ranged 0-80 per 100 sweeps in northern half of the State on clover and alfalfa. (Ill. Ins. Rpt.). SOUTH DAKOTA - Adults and larvae of Chrysopa spp. present in east central area. (Mast). OKLAHOMA - Populations of Chrysopa spp. variable on several crops in various areas of the State. (VanCleave et al.).

NABIDS (Nabis spp.) - ILLINOIS - Averaged 0-40 per 100 sweeps in clover and alfalfa in northern half of State. (Ill. Ins. Rpt.). OKLAHOMA - Populations ranged 0.2-1 per sweep in alfalfa in south central area. (VanCleave, Meharg). WYOMING - In alfalfa, averaged 6 per 100 sweeps in Saratoga Valley, 4 in Burntfork area and 4-10 in Evanston area. (Davison).

AN ALKALI BEE (Nomia melanderi) - WASHINGTON - First pupae found May 28 and first adults June 11, at Gardena, Walla Walla County. This is about one and one-half weeks later than usual. Emergence of first-cutting alfalfa well-timed to coincide with maximum bloom and maximum nesting. (Frick). IDAHO - Males began to emerge June 9 in Homedale area. Emergence more general but light in Homedale and Marsing areas during period, June 15-19. (Homan, Waters).

AN EUROPEAN CORN BORER PARASITE (Lydella grisescens) - DELAWARE - Over 3,400 adults released in several areas of State in an attempt to recolonize the species in the field. Observations over past few years show the species has greatly diminished. (Burbutis, VanDenburgh).

MISCELLANEOUS INSECTS

JAPANESE BEETLE (Popillia japonica) - DELAWARE - Adults present on mimosa trees in Sussex County. (Burbutis). MARYLAND - Adults becoming common on roses and other ornamentals in most sections of Prince Georges and Montgomery Counties. (U. Md., Ent. Dept.). VIRGINIA - Reported for the first time this season on weeds in northern and central Cumberland County June 9 (Seay) and on fig trees in the vicinity of Axton, Henry County, June 10 (Cofer). NORTH CAROLINA - Adults trapped in Castle Hayne May 20. (PPC, So. Reg.). GEORGIA - Adults were trapped in Atlanta on May 19. (PPC, So. Reg.). OKLAHOMA - Examination of 12 traps near

an airfield in Oklahoma County on June 15 and 18 gave negative results. (Pela). INDIANA - No adults have been found in Newton County. Pupation about 25 percent. (Gould, Bills).

NORTHERN MASKED CHAFER (*Cyclocephala borealis*) - MARYLAND - Adults unusually abundant at dusk around homes in Hyattsville, Prince Georges County. (U. Md., Ent. Dept.).

SCARABAEIDS - MAINE - Considerable numbers of May beetles taken in light traps at Presque Isle, Aroostook County, and at Orono, Penobscot County. (Simpson). WISCONSIN - Heavy flights of June beetles observed in Washburn County, June 8-9. Fairly heavy flights also occurred in northeastern counties about same dates. (Wis. Coop. Sur.).

IMPORTED FIRE ANT (*Solenopsis saevissima richteri*) - Found for the first time in Worth County, GEORGIA. Acreages treated during May were: ALABAMA - 15,065; ARKANSAS - 6,606; FLORIDA - 40,538; GEORGIA - 30,480; LOUISIANA - 37,322; MISSISSIPPI - 7,542; and TEXAS - 5,307. (PPC, So. Reg.).

EUROPEAN EARWIG (*Forficula auricularia*) - WASHINGTON - Adults swept from rose planting at Winchester, Grant County, 2 miles from nearest house, in dry, arid cheatgrass habitat. This is unusual habitat for this species. (Landis).

CORRECTION

CEIR 9 (25): 542 - A BORER (Obera sp.) should read A BORER (Oberea sp.).

ADDITIONAL NOTES

WEST VIRGINIA - CODLING MOTH entries in apples noticed since June 15. TARNISHED PLANT BUG numerous and damaging peaches. JAPANESE BEETLE - First emergence of season June 11, Kanawha County. EUROPEAN CORN BORER heavy in various locations in Berkeley County. Of 258 collections made for stored-grain pests on farms on 176 properties in 26 counties, the following pests predominated: CADELLE, SAW-TOOTHED GRAIN BEETLE, BOOKLOUSE, GRANARY WEEVIL, BLACK CARPET BEETLE, FLAT GRAIN BEETLE and PREDACEOUS MITES. (W. Va. Ins. Sur.).

IOWA - BLACK CUTWORM heavy in Grundy, Story, Jasper, Mahaska, and counties east of these. Moderate in Mills, Union, Fremont and Page Counties. No EUROPEAN CORN BORER egg masses have been found at Ankeny since June 17. In the southwestern area, 30-inch corn had 10-60 percent of plants showing leaf feeding with 10-30 new egg masses per 100 plants on June 17-18. Situation is similar in the Marengo area. DIFFERENTIAL GRASSHOPPER averaged 3-5 per square yard along roadsides and fencerows in southwestern area. Heavy damage to wheat by HESSIAN FLY reported in southwestern area. (Iowa Ins. Inf.).

NEW YORK - APPLE APHID is building up in some Saratoga County apple orchards and PLUM CURCULIO has been the hardest insect to control in Saratoga County. More damage can be noticed from curculio than any other insect. CHERRY FRUIT FLY present in most Orleans County cherry orchards. Two fifth-instar CORN EARWORM larvae collected at Wawarsing in the Hudson Valley on June 15 and it appears that EUROPEAN CORN BORER hatching will be ended by July 1 in the Hudson Valley. ONION MAGGOT destroyed 90 percent of untreated onions in Orange County and CUTWORMS are working on corn, pepper and tomatoes in Niagara County. STRIPED CUCUMBER BEETLE caused some damage to melons, squash and cucumbers and COLORADO POTATO BEETLES are abundant in unsprayed fields in Niagara County. (N. Y. Wkly. Rpt.).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Laphyg. frug.	Perid. marg.	Protoparce quinq. sexta	Heliothis zea vires.
ALABAMA						
Auburn 6/12,17	2	3	2	7	2	12
Crossville 6/16				3	9	4
ARIZONA						
Mesa 6/10-16				12		84
ARKANSAS						
Fayetteville 6/15-17	86	13				129
Hope 6/15-17	21	12		65		134
Kelso 6/15-17	2	4		12		20
*Morrilton 6/15-17	11	78	30			130
FLORIDA						
Gainesville 6/16					2	
Quincy 6/8, 15					2	8 5
ILLINOIS						
Urbana 6/12-18		7		55		97 1
INDIANA (Counties)						
Lawrence 6/7-16	37	10		20	10 24	
Tippecanoe 6/11-17	312	5		59		2
KANSAS						
Garden City 6/8,10 12-14	17	9		8	11	2
Hays 6/3, 5-7, 16	56	13			1	4
Manhattan 6/12-19	214	17		10	1 3	44
Wathena 6/7,8, 10-17	78	39		6	1 33	7
LOUISIANA						
Baton Rouge 6/12-18		5	4	1		12
Tallulah 6/13-19						11 5
MISSISSIPPI						
*Stoneville 6/12-18	24	23		48	6	84 2
MISSOURI						
Columbia 5/30-6/18	251	134		31	10	31
Sikeston 6/13-19	3			22		6
NEBRASKA						
Alliance 6/2-10	580	58		129		
Concord 6/3-12	272	3		5		
Kearney 6/4-8	9	2	3	2		19
North Platte 6/8-14	337	44	2	99	19	58 7
Scotts Bluff 6/5-11	171	71		112	1	
NORTH CAROLINA						
Faison 6/18		1				
SOUTH CAROLINA						
Charleston 6/15-21		1	1	1	1	4 2
Clemson 6/13-19	2	3		2	3 8	23 1
TENNESSEE (County)						
Blount 6/9-15	5	6		2	4	8

Two traps - Morrilton; 3 traps - Stoneville

LIGHT TRAP COLLECTIONS - Continued

	Pseud. unip.	Agrot. yps.	Laphyg. frug.	Perid. marg.	Protoparce quinq. sexta	Heliothis zea vires.
TEXAS						
Brownsville 6/6-12		54	42			51
Waco 6/13-19	13	4		61		401 2
WISCONSIN						
*Arlington 6/8-15	552	9		6		1
Green Lake 6/9-15	49					
Middleton 6/11-18	98	16		7		
Platteville 6/5-17	3900	161		112		
River Falls 6/10-16	71	5		1		
Rosendale 6/9-15	70					
Stevens Point 6/9-15	71	5				
*Theresa 6/9-15	498					
Waterford 6/8-15	390					

*Two traps - Arlington; 3 traps - Theresa

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

CITRUS PSYLLA (Diaphorina citri Kuwayama)

Economic Importance: This citrus pest is widespread in tropical and subtropical Asia. It has been called one of the most important citrus insects in India, particularly in the Punjab, where infestations have been especially damaging. Valuable orchards have been reduced to unproductive levels within two or three years in that country. Damage from the psyllid results from the withdrawal of large quantities of sap from the foliage, heavy development of sooty mold on honeydew-covered leaves, and possibly from a toxic substance injected into the plant tissue. The insect feeds on new growth and heavy, continued feeding leads to loss of fruit production, defoliation, and death of the tree.

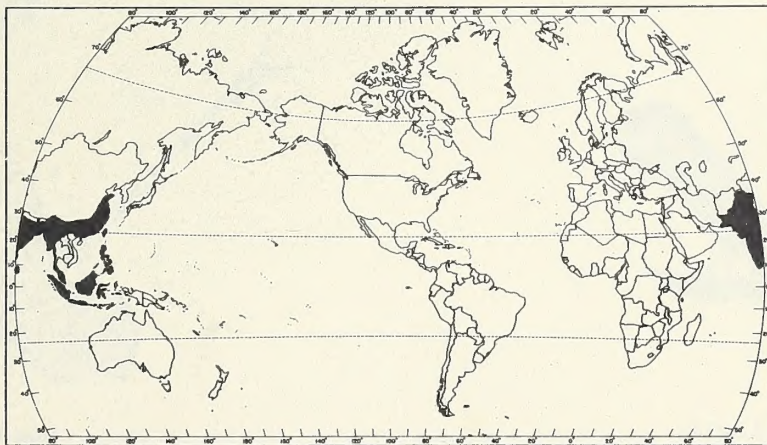


Damage to Citrus Tree

Distribution: Tropical and subtropical Asia, including China, India, Burma, Formosa, Philippine Islands, Malaya, Indonesia, Ceylon and Pakistan.

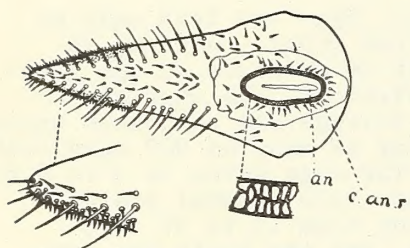
Hosts: Citrus spp. and other Rutaceae.

Life History and Habits: Eggs are laid only on tender shoots or other new growth, usually in crevices. The egg stalk is embedded in the plant tissue. In heavy infestations, the eggs are so numerous that terminal foliage has an orange appearance. The female may lay as many as 800 eggs over a period of 2 months. The eggs hatch in 4 to 6 days in the summer. There are five nymphal instars. Total life cycle requires from 15 to 47 days depending on the season, and the adult may live several months. There is no diapause but populations are low in the winter. As many as nine

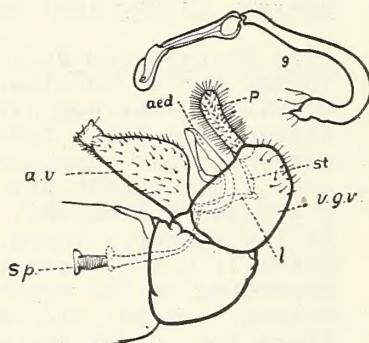
General Distribution of Diaphorina citri

generations a year have been recorded in India. In heavy outbreaks, the foliage is shiny and sticky from honeydew, and soon becomes black from sooty molds. The ground beneath the trees may appear white from honeydew deposits. Nymphs, which are always found on new growth, move in a slow, steady manner when disturbed. The adults leap when disturbed and may fly a short distance. They are usually found in large numbers on the lower sides of the leaves, with heads almost touching the surface and the body raised almost to a 30 degree angle. The period of greatest activity of the psyllid corresponds with the periods of new growth of citrus.

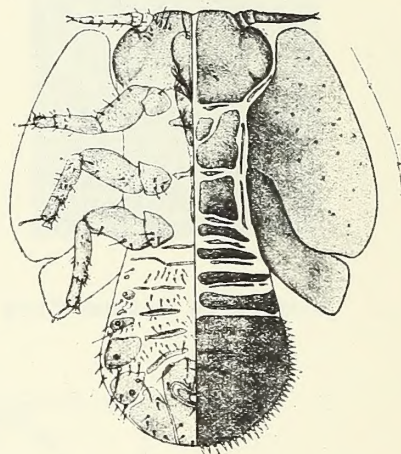
Description: EGG almond-shaped with slender stalk; 0.3 mm. long without stalk. Color, pale yellow at first, becoming orange. Nymph (fifth instar) generally light yellow with orange tinge in region of abdomen. In full-grown nymph antennae, tips of tarsi, and tip of rostrum dark; eyes dark red. Length of body, excluding spines, 1.6 to 1.7 mm. Margin of apical plate has series of lanceolate setae which are covered with waxy secretion. ADULT - Body 2.4 mm. long, forewing 2.4 mm. by 1.0 mm. (greatest width). General color brown, but not uniformly so. Antennae black at tip, tibia light; head, prothorax and abdomen sometimes light-whitish or yellowish. Abdomen usually grayish-brown, but orange in gravid female. Forewing with brown spots. The living insect is covered with a whitish waxy secretion and appears dusty. Male genital segment conspicuous, claspers long and slender. Female genital segment short, small, acute at tip. (Prepared in Survey and Detection Operations in cooperation with other ARS agencies). CEIR 9 (26); 6-26-59.



Female Genitalia



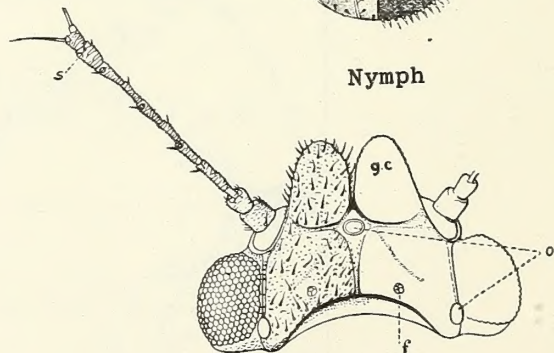
Male Genitalia



Nymph



Adult



Head of Adult

Figures of Diaphorina citri

Figures (except map) from Husain, M. A. and Nath, D. 1927. Dept. Agr. in India Mem. (Ent. Ser.) 10(2), 27 pp.

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